



**ECONOMY AND ENVIRONMENT PROGRAM  
FOR SOUTHEAST ASIA**

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# **EEPSEA ANNUAL REPORT**

**July 1, 2006 - June 30, 2007**

*Herminia Francisco and David Glover*

**September, 2007**



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# **ANNUAL REPORT**

## **July 1, 2006 - June 30, 2007**

### **1. WHAT IS EEPSEA?**

The Economy and Environment Program for Southeast Asia was established in May 1993 to support training and research in environmental and resource economics. Its goal is to strengthen local capacity in the economic analysis of environmental problems so that researchers can provide sound advice to policy-makers. The program uses a networking approach to provide financial support and also meetings, resource persons, access to literature, publication outlets, and opportunities for comparative research across its nine member countries. These are Thailand, Malaysia, Indonesia, the Philippines, Vietnam, Cambodia, Lao PDR, China, and Papua New Guinea.

EEPSEA's structure consists of a Sponsors Group, comprising all donors contributing at least USD 100,000 per year; an Advisory Committee of senior scholars and policy-makers; and a small Secretariat in Singapore. EEPSEA is a project administered by the International Development Research Centre (IDRC) on behalf of the Sponsors Group.

Typically, researchers learn about EEPSEA through various means and apply for a research or training award. Most applicants attend one of EEPSEA's courses before or in conjunction with their research project. Budget ceilings for research projects are CAD 20,000-28,000, depending on the country. Researchers may be affiliated with a university, government or non-government organization and grants are normally made to that institution. Teams of researchers carry out most projects.

Proposals are sent to experts for written review. Those recommended for further consideration must then be revised and presented in a working group meeting at the next EEPSEA biannual meeting. Further revisions are usually called for until the project is judged satisfactory and a grant, approved. After approval, interim findings are presented and critiqued every six months until the project is completed. Researchers receive frequent technical assistance and literature from the Secretariat and resource persons. Final reports from successful projects are widely disseminated by EEPSEA and by the researchers themselves through publications, the media, and consultations with policy-makers.

The selection process for both training and research awards is highly competitive. Approximately one application in four for research awards is accepted.

## 2. HIGHLIGHTS

This year's Annual Report emphasizes the **impacts and accomplishments** of EEPSEA's members, documenting a number of noteworthy achievements. These include examples of policy influence, new courses offered by EEPSEA members and members' career achievements.

Twelve new individual research awards from the regional competition and three from the Small Research Grant Programs were funded. Six courses were offered, two in collaboration with other regional organizations, and four under the Vietnam / Lao PDR / Cambodia sub-program.

EEPSEA's management changed hands in January, when Dr. Herminia Francisco, the then Deputy Director, took over from Dr. David Glover as Director. Working with her are two senior economists, Dr. Orapan Nabangchang and Dr. Bui Dung The, both EEPSEA researchers of long standing. They continue to work at their home institutions in Bangkok and Hue respectively, e-communicating with EEPSEA on a half-time basis.

To help define the emphasis of EEPSEA's programming in the years to come, the new management reviewed EEPSEA's accomplishments over the past fourteen years, studied past external evaluations and held discussions with key stakeholders (See report in Annex A). There were no substantial changes to the regular set of activities, but some activities, like in-country programs, regional partnerships and regional research initiatives were expanded.

## 3. REGIONAL TRAINING

As part of its increased collaboration with other regional organizations in Southeast Asia, EEPSEA undertook two joint training activities:

### a) **EEPSEA in the Executive Education Forest Policy Short Course** ✓

This course was organized from April 23 to May 4, 2007 by the FAO in Bangkok in collaboration with the International Tropical Timber Organization, the USDA Forest Service, the Thailand Environment Institute, and EEPSEA.

EEPSEA's contribution was to teach environmental economics for two days of the course, specifically, *Tools for Policy Analysis and Evaluation in the Forestry Sector*, and *Practical Applications of Economic Assessment Tools*. The lectures were provided by EEPSEA's senior economists, Dr. Bui Dung The and Dr. Orapan Nabangchang. The EEPSEA Director also gave some lectures. The lectures made extensive use of EEPSEA research as case study materials.

✓ b) **SEARCA-EEPSEA Executive Forum on Environmental Economics for Decision-Making**

Held from June 25-29, 2007, this course targeted natural resource project managers in Asia. There were 21 participants from six countries and fifteen organizations. EEPSEA provided the resource persons for three of this five-day course at Los Banos, Philippines. Among its resource persons were Drs. Bui Dung The, Anabeth Indab and Dieldre Harder, all senior EEPSEA researchers. The EEPSEA Director also taught some topics. In addition, EEPSEA invited Dr. Marian Delos Angeles, a World Bank Institute senior environmental economist and former EEPSEA Advisory Committee member, to participate as resource person for two days of the forum.

✓ c) **Workshop on the Economics of Adaptation to Sea Level Rise (SLR)**

This two-day workshop followed the 27<sup>th</sup> biannual workshop in May 2007. The proposals presented fell into two categories: 1) Policy, Institutional, and Information Constraints on Adaptation to SLR; and 2) Cost-Benefit Analysis of Adaptation Strategies for SLR. Researchers from China, the Philippines, Indonesia, Sri Lanka, Thailand, and Vietnam presented nine proposals. Policy-makers from China, Vietnam and the Philippines also took part in the workshop, as did international resource persons.

#### **4. REGIONAL RESEARCH AWARDS**

Twelve projects were approved, five of which were PhD thesis awards.

1. Rodelio Subade  
*Economic Valuation of Environmental Damages Resulting from the Solar 1-Petron Guimaras Oil Spill*
2. Kunlayanee Pornpinatepong  
*An Investigation of Policy Options for Sustainable Fishery in Songkhla Lake, Thailand*
3. Gong Yazhen (PhD thesis)  
*Integrating Social Capital into Institutional Analysis of Forest Carbon Sequestration Projects in China*
4. Pham Hung Thai (PhD thesis)  
*The Impacts of Trade Liberalization on Industrial Pollution in Vietnam: Current Issues and Policy Implications*

5. Rosalina Palanca-Tan  
*The Value of a Statistical Life, Inferred from Willingness to Pay for a Dengue Fever Vaccine in Manila – Phase II.*
6. Ligu Lin (PhD thesis)  
*Improving Firms' Compliance with Environmental Regulations: Chinese Environmental Regulatory Systems*
7. Lourdes Montenegro  
*Policing Pollution Control in the Philippines: Issues and Prospects*
8. Le Ha Thanh  
*Assessing the Impacts of Environmental Regulations on the Food Processing Industry in Vietnam: Environmental Protection Fees on Industrial Wastewater*
9. Margaret Calderon  
*Who Will Tend the Terraces? An Exploratory Study.*
10. Zanxin Wang  
*Estimating Non-Market Value of Water Quality Improvements in Tianmuhu Lake, China: Choice Modeling Combined with a Citizen's Jury.*
11. Nghia Dai Tran (PhD thesis)  
*An Analysis of Economic and Environmental Impacts of the Transition to Organic Tea Production in Thai Nguyen Province, Vietnam.*
12. Bhadrani Thoradeniya (PhD thesis)  
*Trade-Off Analysis for Ma Oya River Basin Development Projects, Sri Lanka*

## 5. BIENNIAL WORKSHOPS

The format for these workshops has remained essentially unchanged in recent years:

- Day 1: Bilateral sessions
- Day 2: Morning plenary,  
afternoon working groups
- Day 3: Morning working groups,  
afternoon plenary
- Day 4: Bilateral sessions

The plenary sessions contain a mixture of presentations, with one or two exploring a broad theme and the remainder describing in detail how a particular research method was applied in an actual project.

The working group sessions are intended to provide advice to researchers about how to design and implement the research projects they have submitted to EEPSEA. The reports presented in these sessions can be proposals, interim reports or final reports.

The Day 1 bilateral sessions are “dry runs” or rehearsals of the working group presentations, to make sure the presentations are clear and complete. This also makes it easier for the other participants to offer useful questions and comments, rather than clarifying things they do not understand during the actual presentation.

The Day 4 bilateral sessions are wrap-up sessions between the researchers and their advisors, to clarify any matters remaining from the discussions of the previous days. These meetings also serve to establish personal contact between the advisor and the researcher, which can be pursued through e-mail over the following months.

Deadlines for submissions for the workshops are as follows:

May Workshop

February 1: proposals

March 1: final reports

April 1: interim reports

November Workshop

August 1: proposals

September 1: final reports

October 1: interim reports

**a) November 2006 Biannual Workshop**

The 26<sup>th</sup> biannual workshop was held in Cebu, Philippines and included four plenary lectures and concurrent sessions for presentations by researchers.

The opening plenary session, by Zhang Shiqiu, assessed a set of policies that attempted to promote both **environmental protection and poverty alleviation in China**. She focused on two policies affecting agriculture and forest use: the Sloping Land Conversion Program and the Natural Forest Protection Program. In both cases, preliminary results showed a small but positive but small impact on poverty.

Next, Mingsarn Kaosa-ard discussed a process she was involved in to set **environmental priorities in Thailand**. Its purpose was to assist the government in allocating resources among a wide range of environmental problems. It involved a variety of techniques for presenting and discussing information; these included valuation, environmental indicators, expert judgement, mind mapping and citizen surveys. The effectiveness of the process was found to depend on factors such as availability of examples of best practices; availability of information in forms that allowed comparison; and the presence of active civil society organizations.



The closing plenary session consisted of two talks on climate change. In the first talk, Rashid Hassan presented the results of a multi-country study of the expected **impacts of climate change on agriculture in Africa**. He found that revenues were likely to fall for dry land crops and livestock, while irrigated agriculture would be less affected. The study revealed that, where water was available, irrigation proved to be a practical adaptation measure.

In the second talk, Benoit Laplante discussed the impacts of **climate change-induced sea level rise**. These were found to be particularly significant for Vietnam, where much of the productive area could be submerged.

The session concluded with a discussion of possible **new research topics** for environmental economists. These included inputs to national adaptation plans and the study of policies and institutions that could affect incentives for adaptation, including ones that discourage it by creating moral hazards.

#### **b) May 2007 Biannual Workshop**

The 27<sup>th</sup> biannual workshop was the largest ever, with some 65 people in attendance. It was held for the first time in China, in Beijing. The main workshop was combined with several special events: interim reports from a group of researchers working jointly on the enforcement of pollution control regulations; final reports from the Vietnam Small Research Grant Program; a panel of policy-makers discussing strategies for adaptation to climate change; and a two-day workshop to discuss pre-proposals on adaptation to climate change, particularly sea level rise.

The main workshop included four plenary sessions. Dr. Nancy Olewiler, Director of the Public Policy Program at Simon Fraser University, encouraged researchers to go beyond research to **policy analysis** by providing decision-makers with specific options, evaluated according to specific criteria. She provided a framework for doing so based on the four-day course she prepared for EEPSEA in May 2006.

The second plenary session was a discussion led by Dr. Dale Whittington about the recent **evaluation of the World Bank research**. The evaluation raised many issues that applied to economic research in general. This proved useful in drawing people's attention to problems such as the difficulty of proving causation (as opposed to correlation) and the desirability of "treatment versus control group" comparisons in project evaluation.

Dr. Anond Snidvongs set the stage for deliberations on climate change research by discussing the **physical science of sea level rise**. As always, things are more complicated than they initially appear. Dr. Snidvongs said that the extent of SLR arising from climate change would vary considerably from place to place, depending on temperature, wind direction and topography. Also, while the amount of "routine" SLR

likely to result from thermal expansion of the oceans was fairly predictable, the SLR that could result from catastrophic events such as the break-up of large ice sheets on Greenland or Antarctica was not.

Finally, a panel of senior **policy-makers** from China, Thailand, Vietnam and the Philippines presented their country plans for **adaptation to climate change and sea level rise**. Here and in other sessions, they put forth suggestions for research and observations about the means by which research is put into practice by decision-makers.

## **6. VIETNAM, CAMBODIA AND LAO PDR PROGRAMS**

Most of the activities initiated by EEPSEA in Vietnam, Lao PDR and Cambodia in July 2005, under the supervision of EEPSEA's then-Deputy Director, Dr. Herminia Francisco, continued in 2006 and 2007. Dr. Orapan Nabangchang, the EEPSEA Senior Economist in Thailand, helped monitor and supervise the research projects in Cambodia and Lao PDR, while Dr. Bui Dung The assisted in Vietnam.

### **a) Vietnam Small Research Grants**

Five research projects from nine graduates of the first Vietnam teachers' course were approved in April 2006. A mid-project meeting was held from November 1-4, 2006, at the Environmental Economics Unit, National Economics University in Ho Chi Minh City. Resource persons were Drs. David Glover, Herminia Francisco, Orapan Nabangchang, Bui Dung The and Truong Dang Thuy. All were satisfied with the progress made by the researchers and decided that the teams should present their results at the regional biannual workshop in May 2007 in Beijing. Participants and resource persons in Beijing noted that, despite the small budgets, the research outputs were comparable with those of EEPSEA researchers from the regional competition.

A repeat of the teachers' course will take place in August 2007 and is expected to produce another set of small research grants.

### **b) Cambodia and Lao PDR Small Research Grants**

From the Cambodian researchers, one project was approved this year, making the total number of research projects from Cambodia, four under the small research grants program.

- Top Neth

*Cost Benefit Analysis of Rubber Plantation Development in Cambodia*

Last year's Annual Report noted that three of the six proposals received from the Laotian researchers had been approved. This year two more projects from Lao PDR were approved:

- Kaisone Thanthatheb

*Contingent Valuation of In Situ Biodiversity Conservation and Sustainable Use in Houay Nhang Protected Area*

- Duangmany Luangmany

*Incremental Values of Hydropower Dams: Potential for Hydrogen Energy Production*

### c) Courses

Four courses were offered in Vietnam, Cambodia and Lao PDR; two for policy-makers in Lao PDR and Vietnam, and two for researchers from Lao PDR and Cambodia.

#### i) *Environmental Economics for Policy-makers of Vietnam*

This August 7-11 2006 course in Hanoi was designed by EEPSEA with a team of three Vietnamese resource persons: Dr. Bui Dung The from EEPSEA and Hue University, Dr. Nguyen The Chinh from the National Economic University in Hanoi and Dr. Nguyen Chi Quang, a consultant to WWF and the Mekong River Basin Commission. The collaborating agencies included the Ministry of Planning and Investment, and the Ministry of Natural Resources and Environment. Thirty participants attended. The objective was to acquaint participants with tools they could use in their work. The course was in two parts: *Benefit-Cost Analysis* and *Environmental Valuation and Economic Instruments*.

#### ii) *Environmental Economics for Policy-makers of Lao PD*

This October 22-24 event in Vientiane was developed primarily for national and provincial decision-makers of the Science, Technology and Environment Agency with representatives from other national agencies. The Environment Research Institute (ERI) was the key partner in organizing this course. The course topics were developed by Benoit Laplante, EEPSEA resource person, in consultation with EEPSEA and with ERI. Local translation was provided with the help of Orapan Nabangchang, EEPSEA Senior Economist. Topics covered included *Cost-Benefit Analysis*, *Economic Valuation of Environmental Impacts* and *Policy Instruments for Environmental Management*.

#### iii) *Contingent Valuation: Theory and Practice for Laotian and Cambodian Researchers*

Four proposals from Laotian and Cambodian teams recommended the use of the contingent (hypothetical) survey (CV) method to assess the recreational value of urban parks and protected areas and to suggest appropriate pricing for improved solid waste management practices. EEPSEA had supported a number of research projects using this

technique and was thus able to design a training program in which EEPSEA senior researchers taught the junior researchers from Vietnam, Cambodia and Lao PDR the basic theory and techniques of the CV method. The teaching techniques thus relied on practicum in which the participants acquired first-hand experience in carrying out focus group discussions, refining survey instruments, and analysing data. There were 17 researcher-participants and 12 observers from government agencies affiliated with the Environment Research Institute. The course took place from July 31-August 5 in Vientiane, Lao PDR.

#### *iv) Environmental Economics for Cambodian NGOs*

NGOs play a large role in Cambodia, advocating policy change and implementing many of the projects financed by foreign donors. Since the country is largely dependent on natural resources for its economic development, many of the issues these NGOs work on are related to environmental management and natural resources.

The course was conceived to help NGOs gain a better understanding of how economists look at these issues, what kind of research they implement and how they can make use of environment economics research for advocacy. The course was held from January 22-26 in Siهانoukville and attracted 23 participants from 15 NGOs. Resource persons included two Cambodian associates (*Ken Serey Rotha* and *Sideth Muong*), *Bui Dung The* and *Orapan Nabangchang*. The EEPSEA Director also taught and provided overall supervision.

#### **d) Policy Brief Translations**

One of the means EEPSEA uses to disseminate its research is a series of four-page Policy Briefs that summarize the findings and recommendations of each EEPSEA Research Report. Local translation of these briefs has been underway for several years in Vietnam. Similar arrangements have been made in Lao PDR and Cambodia. In Cambodia, the Cambodian Development Resource Institute takes care of local costs of translation, layout and distribution with EEPSEA paying for printing costs. In Lao PDR, the National University of Laos takes care of the cost of translation while printing and distribution costs are paid for by EEPSEA.

The translation of Policy Briefs to Thai began this year.

## **7. OTHER MEETINGS**

Dr. Hermi Francisco presented EEPSEA's work at a meeting of the Professional Association for China's Environment (PACE), The Policy Research Center of the State Environmental Protection Administration and the Development Research Group of the

World Bank in Qingdao, China, from July 18-21, 2006. The purpose of the meeting was to encourage interest in environmental and resource economics among young practitioners, researchers and students in China.

As part EEPSEA's in-country institutional capacity-building efforts, Orapan Nabangchang met Kasemsun Chinnavaso, Secretary General of the Office of Natural Resources and Environmental Policy and Planning (ONEP) to discuss the agency's needs in building capacity in the area of natural resources and environmental economics. Several meetings were held, culminating in a plan for EEPSEA to organize a five-day course in October 2007. The objective was to provide an overview of natural resources and environmental economics and applications for natural resource managers from different government agencies. The course will also see if small research grants for the research teams of these government agencies may be needed.

A similar initiative was launched in the Philippines through two meetings between Hermi Francisco and the Undersecretary of Policy, Department of Environment and Natural Resources (DENR). The department provided a list of priority areas in which they needed help from environmental economists. Two topics from the list are being developed into proposals. Training will be provided to support the implementation of these studies.

## 8. PUBLICATIONS PROGRAM

This section lists the reports released during the period from July 2006 to June 2007.

### a) Research Reports

All research reports (RRs) are now entered in the *Eldis Gateway to Development Information*, an online information archive and news service financed by Sida and other donors.

2006-RR1: *The Implementation of Effluent Taxes for Cambodia: An Assessment of Pollutant Levies* – Sideth Muong

2006-RR2: *Health Impacts of Diesel Vehicle Emissions: The Case of Colombo* – Sunil Chandrasiri

2006-RR3: *Payments for Environmental Services in Vietnam: Assessing an Economic Approach to Sustainable Forest Management* – Bui Dung The and Hong Bich Ngoc

2006-RR4: *Costs and Benefits of Flue Gas Desulfurization for Pollution Control at the Mae Moh Power Plant, Thailand* – Varaporn Punyawadee et al

2006-RR5: *Towards Sustainable Development in Angkor, Cambodia: Social, Environmental and Financial Aspects of Conserving Cultural Heritage* – Thanakvaro De Lopez et al

2006-RR6: *Valuing the Economic Benefits of Preserving Cultural Heritage: The My Son Sanctuary World Heritage Site in Vietnam* – Tran Huu Tuan

2006-RR7: *Crop Insurance and Agrochemical Use in the Manasi Watershed, Xinjiang, China* – Funing Zhong et al

2006-RR8: *Tariff Reduction, Carbon Emissions, and Poverty: An Economy-wide Assessment for the Philippines* – Erwin L Corong

2006-RR9: *A Dynamic Computable General Equilibrium Analysis of Environmental Taxation and “Rural-Urban” Migration Distortions in China* – Jing Cao

## **b) Technical Reports**

*Refuge Policies to Manage the Resistance of Pest Population to Genetically Modified (GM) Crops* – Fangbin Qiao

*Impact Evaluation of the Environmental User Fee System: A Stakeholder Perspective* - Maria Angeles O Catelo et al

## **c) Policy Briefs**

*Pollution Prevention Pays: Pollution Charges in Cambodia* – Sideth Muong

*Don't Choke on the Cost: The Health Benefits of Reducing Diesel Pollution in Colombo, Sri Lanka* – Sunil Chandrasiri

*Paying for Environmental Services: A Trial in Vietnam* – Bui Dung The and Hong Bich Ngoc

*Pollution Clean Up At What Price? A Cost-Benefit Study From Thailand* – Varaporn Punyawadee et al

*Rags Among Archaeological Riches: Sustainable Development in the Angkor World Heritage Site* – Thanakvaro De Lopez et al

*How Much For World Heritage? The Value of Temple Preservation in Vietnam* – Tran Huu Tuan

*What Price Crop Insurance? An Environmental Analysis From China* – Funing Zhong et al

*Can a Carbon Tax Help the Poor? A Study from the Philippines* – Erwin L Corong

*Environmental Taxes and Rural-Urban Migration: A Study from China* – Jing Cao

*Paying Too Much For Pollution? An Assessment of an Environmental User Fee from the Philippines* – Maria Angeles O Catelo et al

**d) Website and Electronic Media**

All EEPSEA publications are available free of charge at [www.eepsea.org](http://www.eepsea.org), along with the outline and reading list of the Environmental and Resource Economics core course, guidelines for proposals, news and announcements, and links to other environmental economics websites.

In addition, the Teachers' Manual and Cost-Benefit Analysis Manual developed for Cambodia, Lao PDR and Vietnam are available in CD-ROM format on request.

## **9. IMPACT AND OUTREACH**

**a) Policy Impact and Influence**

**i) *Government Supports Micro-Hydro Electricity Plants in Thailand: The Long and Winding Road to Policy Impact***

In 1997, EEPSEA supported a study by Sitanon Jesdapipat (then with the Thailand Environment Institute) and Siriporn Kiratikarnkul of Maejo University to explore the upgrading and output pricing of micro-hydro power plants in Chiangmai. The study was motivated in part by Thailand's search for sustainable forms of power, since over 85% of its power supply currently comes from fossil fuels. The study's main conclusion was that with adequate backing, micro-hydro projects could usefully complement the existing grid. The authors argued that benefits like forest conservation made this investment more attractive than conventional electricity production. The study recommended that the government invest in a scheme that would connect these small-scale plants to the national grid, while keeping open the option for villages to buy from the grid.

Ten years later, the Thai Government has now taken up this recommendation. In the 2007 budgeting year, the government committed to investing 150 million baht (about USD 4 million) over the following three years to commercialize the electricity supply from existing micro-hydro plants.

## ***ii) Bringing Firms and Regulators Together in the Philippines***

In carrying out her research on the implementation of pollution control regulations in the Philippines, Les Catelo was careful to involve stakeholders from an early stage to the end of the project. Because the research team was aware of the problems firms faced in responding to uneven and uncertain enforcement, the firms asked the team to convey their concerns to the regulators. For its part, the Laguna Lake Development Authority (LLDA) found the information provided by the team about firms' responses useful in reassessing its practices and invited the team to discuss its findings with the LLDA staff on three separate occasions.

*"....the presentation to the LLDA Management Committee meeting in August was an important input to decision-making. Considering the importance of your study, we believe that the LLDA personnel involved in the implementation of the EUFS [should] be made aware of the results of the study. As such, may we invite you to present it again to all the staff of the Pollution Control Division and the Environmental Impact Assessment Unit on September 28, 2006...."* (Excerpt from a letter from Casimiro A. Ynares III, M.D., the LLDA General Manager, dated September 26, 2006.)

## ***iii) Angkor Wat Research Leads to Action***

A recent EEPSEA Research Report (2006-RR5) by Thanakvaro de Lopez examined the social and environmental impacts of the rapid expansion of tourism at the Angkor Wat temples in Cambodia. This report, along with a New Zealand Aid-funded survey of villages in the Angkor Wat area, offers possibilities for involving communities in the management of the Angkor Park. This EEPSEA report also provides inputs to the negotiations for a New Zealand Aid project to develop a comprehensive management plan for the area. The Director of the IDRC Regional Office for Southeast Asia, Richard Fuchs, referred to the report when he met with the APSARA Authority on his recent trip to Cambodia. He suggested that the IDRC package *"an integrated program of development research with local and international partners that focuses on the environment, livelihoods and other social and economic policies"* of Angkor Wat communities. The IDRC visit was a response to the request of the Canadian Ambassador to Cambodia, Donica Pottie.

## ***iv) EEPSEA Links with the Justice System of Thailand***

With increasing incidences of environmental conflicts and damage and the growing number of legal cases over natural resources use and benefits sharing in Thailand, the Ministry of Justice has begun to create linkages with sources of technical support to assist the judicial process. Orapan Nabangchang was invited to three conferences to talk about environmental economics and its role in mitigation and damage valuation. The conferences, organized by the Ministry of Justice through the Rabibbhadanasak Research Institute, brought together judges and lawyers involved in environmental disputes, along with doctors, academics, government officials and NGOs.



**v) *From Research to Legislation: Protected Area Management in the Philippines***

Through his research on the valuation of the biodiversity habitat in the northwest Panay protected area of the Philippines, Rodelio Subade has become involved in the management council overseeing this protected area. He gives lectures on resource valuation using his EEPSEA research study. He has been asked to assist in drafting local ordinances and policies to capture the economic value of endangered species/habitat conservation.

**vi) *Supporting the Development of a Provincial Solid Waste Management Plan***

Zeny Sumalde was invited as resource person on the topics of financing and economic instruments, rapid social impact assessment, and integration of gender issues in the preparation of the Provincial Solid Waste Management Framework for the Province of Surigao del Norte, Philippines. This invitation came about as a result of the exposure she received in presenting her EEPSEA research on *Financing Solid Waste Management by Local Government Units*.

**b) *Media Exposure***

Dr. David Glover was featured in several media events connected with the recurrence of haze generated by forest fires in Indonesia. A letter to the Editor was published in Singapore's *Straits Times* newspaper on October 14 2006 while interviews appeared in the *Straits Times* on October 24 and the *Bloomberg News Channel* on October 9; and an interview was featured on Danish radio on October 30.

Herminia Francisco et al's publication on *Winning the Water War: Watersheds, Water Policies and Water Institutions* was featured in the August 2 Philippine *Daily Inquirer* for winning the Philippine National Agriculture, Science, & Technology (NAST) 2007 Book Award. Dr. Francisco wrote several chapters of this book.

Anan Wattanakuljarus' *Unseen Thai Tourism: Where Does the Baht Go?*, appeared in the *Bangkok Post* on September 28, 2006.

A story based on Arief Yusuf's work appeared as *Carbon Tax 'Won't Hurt' the World's Poor* in *SciDev.Net* on May 17, 2007.

Rodelio Subade's marine policy article, based on his EEPSEA-funded dissertation, was the regional winner of the Republika Award for Outstanding Published Research Article from the CHED Zonal Center for Panay and Negros, the Philippines.

### c) **Members' Accomplishments and Career Development**

Several members applied skills they developed with EEPSEA in other non-EEPSEA funded fora/programs or in relevant job positions they assumed.

**Canesio Predo** was teaching assistant for the EEPSEA Cost-Benefit Analysis Course held at Ho Chi Minh City in February 2006. He helped prepare a *User Manual for Benefit Cost Analysis Using Microsoft Excel*. Because of this experience, the National Economic Development Authority in Region 8 of the Philippines requested Canesio to conduct a course for NEDA staff on *Feasibility Study Preparation with Environmental Valuation in Agriculture Projects*.

**Corinthia Naz** is Institutional Development and Management Advisor in the UNDP's Afghanistan Sub-national Governance Program. Much of her work relates to solid waste management, the subject of her EEPSEA research in the Philippines.

**Dang Kim Son** was recently promoted to be the Director of the Institute of Policy and Strategy for Agriculture and Rural Development under the Vietnamese Ministry of Agriculture and Rural Development.

**Nguyen Nghia Bien** is now Vice-Director of the Department of Planning and Investment in the same Ministry.

Lubiao Zhang has been the Director General and Professor at the Department of International Cooperation of the Chinese Academy of Agricultural Sciences since 2005. Prior to this, he acted as the World Bank China Coordinator for two years of the Shanghai Global Conference on *Scaling up Poverty Reduction*.

**Priyanga Kumara Premarathne** now works with the UNDP in Sri Lanka.

**Jie He** is Assistant Professor in the Department of Economics at the University of Sherbrooke in Canada.

**Luthfi Fatah** was recently appointed Research Management Adviser for an ACIAR project in Indonesia called *Support for Market-Driven Adaptive Research (SMAR)*.

**Jin Jianjun** completed her PhD at the University of Macau last December and is now working as Associate Professor at the Beijing Normal University.

**Mao Xianqiang** has been promoted to the position of Professor and Director of the Environmental Science, Policy and Management Programme at the School of Environment, Beijing Normal University.

#### d) Journal Articles and Chapters

A number of publications derived from EEPSEA-funded reports were published in journals and books:

- *Valuing Cultural Heritage in Developing Countries: Comparing and Pooling Contingent Valuation and Choice Modeling Estimates*, by Tran Huu Tuan, in *Environmental and Resource Economics*, December 7, 2006.
- *Mechanisms to capture economic values of marine biodiversity: The case of Tubbataha Reefs UNESCO World Heritage Site, Philippines*, by Rodelio Subade, in *Marine Policy*, 2006.
- *A Study on the Relationship between Crop Insurance and Farmers' Agrochemical Uses: An Empirical Analysis of the Manas Watershed, Xinjiang, China*, by Zhong Funing, Ning Manxiu, Xing Li, and Miao Qi, in *Chinese Rural Economy*, June, 2006.
- *Does Crop Insurance Influence Agrochemical Uses under Current Chinese Situations? A Case Study in the Manasi Watershed, Xinjiang*, by Zhong Funing, Ning Manxiu, and Xing Li, in *Agricultural Economics*, Vol. 36, Issue 1, January, 2007.
- *Is Tourism Growth Pro-Poor Growth? The Economy-Wide Effects of Tourism in Thailand*, by Anan Wattanakuljarus, in Mingsarn Kaosa-ard, et al (Eds.) entitled, *Mekong Tourism: Blessing for All?*, 2006.
- *The Economy-Wide Effects of Tourism on the Thai Economy and the Use of Water Resources*, by Anan Wattanakuljarus. Occasional Paper of the Social Research Institute, Chiang Mai University, Chiang Mai, Thailand, 2006.
- *Economic and Poverty Impacts of a Voluntary Carbon Reduction for a Small Liberalized Developing Economy: The Case of the Philippines*, by Erwin Corong, in *Fondazione Eni Enrico Mattei Note de Lavoro Series 9*, January 2007.
- *Barriers to water markets in the Heihe River Basin in Northwest China*, by Junlian Zhang in *Agricultural Water Management*, 87 (2007), 32-40. ✓
- *Valuing the economic benefits of black-faced spoonbill conservation in Macao*, by Jin Jianjun, in *Journal of Macau Studies*, Vol. 40, 2007. ✓
- *Environmental Economics has a Promising Future in Vietnam*, by David Glover, in *Vietnamese Journal of Environmental Economics*, November 2006. ✗
- *Willingness to pay for improved watershed management: Evidence from Metro Manila Philippines*, by M.M. Calderon, L. D. Camacho, M.G. Carandang, J.T. Dizon,

L.L. Rebugio and N.L. Tolentino, in *Forest Science and Technology*, Vol. 2, No. 1, June 2006.

- *Institutionalization of a water user fee for watershed management*, by J.T. Dizon, M. Calderon, L. D. Camacho, M.G. Carandang, L.L. Rebugio and N.L. Tolentino, in *Forest Science and Technology*, Vol. 2, No. 1, June 2006.

#### **e) Applications and Citations**

In several cases, methods employed by EEPSEA researchers were applied in research or development projects elsewhere. EEPSEA reports were also cited or re-published in other publications.

EEPSEA researcher Billy Manoka of Papua New Guinea is a member of the Oceania Development Network (ODN), a group recently formed to help researchers in the Pacific region interact, share knowledge and skills to foster team research, and build and update regional databases. ODN has adopted many aspects of the EEPSEA model and used EEPSEA teaching materials on *How to Design a Research Project* at its inaugural workshop in Port Moresby in October 2006.

The South Asia Network of Economic Research Institutes similarly used the same paper.

David Glover's paper *What Makes a Good Policy Paper?* is used in a graduate seminar at the University of Wisconsin-Madison in the Department of Educational Policy Studies as an aid to students in writing policy-relevant publications.

Anan Wattanakuljarus was invited to lecture on *The Introduction and Application of General Equilibrium Modelling Package (GEMPACK)* (16 hours) for the South-East Asian Research Association of Vietnam and the Institute of Socio-Economic Development and Enterprise Management, Hanoi, Vietnam in July 2006.

#### **f) Conference Presentations**

Several researchers presented work supported by EEPSEA at regional and international conferences – most with sponsorship from other agencies – as listed below.

##### **i) EEPSEA at the International Society of Ecological Economics (Delhi, December 2006)**

Dieldre Harder, *Willingness to Pay to Conserve the Philippine Eagles*.

Hermi Francisco also attended this conference. She served as the resource person for the Philippine Eagle study.

ii) *EEPSEA at the International Seminar on Sustaining Growth (Ho Chi Minh City, Vietnam, June 21-22, 2007)*

Margaret Calderon, *Metro Manila Households' Willing-To-Pay for Improved Watershed Services*.

Maria Rebecca Campos, *Modelling the Impact of Philippine Fisheries Policies*.

Truong Dang Thuy, *Willingness to Pay for Conservation of the Vietnamese Rhino*.

Orapan Nabangchang, *A Cost Benefit Analysis of Resettlement Policy: A Case Study of Ob Luang National Park: Northern Thailand*.

iii) *Other Conferences*

Zenaida Sumalde, *Effects of Intensive Coastal Aquaculture on Water Quality and Aquaculture Productivity in Bolinao, Philippines*, presented at the Coastal Zone Asia Pacific Conference in Batam, Indonesia, August 28-31, 2006.

Canesio Predo and Herminia Francisco, *Improving Productivity, Profitability and Sustainability of Degraded Grasslands through Tree-based Land Use Systems in the Philippines*, presented at the Asian Modelling and Simulation Conference in Chiang Mai, Thailand, January 2007.

Thang Nam Do, *Willingness to Pay for Wetland Improvement in Vietnam's Mekong River Delta*, presented at the Australian Agriculture and Resource Economics Society's 51<sup>st</sup> Annual Conference, Queenstown, February 13-16, 2007.

Arief Anshory Yusuf, *The Distributional Effect of Carbon Tax in Developing Countries: The Case of Indonesia*, presented at the Second Summer School on Development on Inequality, Growth and Human Development organised by Unidea/UniCredit Foundation, the University of Florence and the European Development Network, Italy, July 1-6, 2007.

## 10. MANAGEMENT

a) **Secretariat**

EEPSEA's management changed hands in January, when Dr. Herminia Francisco took over from Dr. David Glover as Director. Working with her are two senior economists, Dr. Orapan Nabangchang and Dr. Bui Dung The, both EEPSEA researchers

of long standing. They continue to work at their home institutions in Bangkok and Hue respectively, e-communicating with EEPSEA on a half-time basis. An additional part-time senior economist will be hired in early 2008 to help out in Indonesia, particularly in liaising with CIDA-funded projects there.

Catherine Ndiaye continues as Program Assistant, with part-time assistance from Ang Cheng Hiang. Ms. Ang is expected to become a full-time staff in the near future to assist with the growing number of activities described above.

#### **b) Sponsors Group**

The Sponsors Group of participating donors sets policy, provides financial support and approves the annual Work Program and Budget. It comprises all donors contributing at least USD 100,000 per year. The current membership is listed below. All amounts are expressed in CAD. (Since contributions are made in the donor's currency, exact CAD equivalents may vary.)

- International Development Research Centre (IDRC), Canada \$800,000/year
- Swedish International Development Agency (Sida) \$575,000/year
- Canadian International Development Agency (CIDA) \$400,000/year

#### **c) Advisory Committee**

The Advisory Committee advises the Director on priorities for research and training and recommends the annual Work Program to the Sponsors Group. The Committee consists of senior scholars and policy-makers active in environmental management in Asia. The majority of the Committee's members come from Asia. Each member has a three-year term, renewable once for Asian members. The Committee meets once a year, in conjunction with the November biannual workshop.

The terms of all members of the last sitting committee expired in May 2006. New committee members were appointed and held their first meeting at the November 2006 biannual workshop. They are:

- Dr. Zhang Shiqui (Susan), Beijing University, China
- Dr. Mingsarn Kaosa-ard, Chiang Mai University, Thailand
- Dr. Ben Malayang III, Silliman University and former Undersecretary of the Department of Environment and Natural Resources, Philippines
- Dr. Monemany Nhoybouakong, Environmental Research Institute, Lao PDR

- Dr. Wiktor Adamowicz, University of Alberta, Canada

## **SPECIAL REPORT**

### **EEPSEA'S FIRST FOURTEEN YEARS AND FUTURE DIRECTIONS**

**Herminia Francisco**

EEPSEA's new management has assessed what the program has accomplished over the past fourteen years to generate insights for future planning. This assessment looked at the research projects funded, training courses offered, number of researchers and trainees, and people supported to attend conferences. A review of the two last external evaluation reports was also carried out. In addition, discussions were held with researchers and policy-makers in several countries.

#### ***A Statistical Summary***

- EEPSEA has provided training to 721 participants (533 individuals as some have attended more than one course) through 28 training courses. It has also supported the participation of an additional 44 people at short-term international courses. About 85% of those who received the training were researchers, while the rest were policy-makers or development workers from non-government organizations involved in environmental issues. A fourth of the researchers who received training have submitted research proposals to EEPSEA; the proportion being higher for training programs tied up with the Small Research Grant Program, particularly those offered in Vietnam, Lao PDR and Cambodia.
- EEPSEA has supported 194 research projects (with 159 project leaders). The most common topic was forest management (29%), followed by urban pollution (16%) and water management (11%). The Philippines (23%), Vietnam (20%), and China (18%) generated most of the research projects. There were some differences in top-ranking research areas by country. Water pollution and solid waste were the most common topics in the Philippines while Vietnamese research tended to focus on forestry and upland issues. For China, the dominant issue was water. About 40% of EEPSEA researchers in the last 14 years have been women.

#### ***What Did Our Recent External Evaluators Say?***

- The Vincent and Hirsch (2005) evaluation confirmed that EEPSEA had a pool of Asian experts that it could tap for its activities in the region. EEPSEA has in fact relied on this pool of Asian researchers for its Cambodia, Lao PDR, and Vietnam activities since the mid 1990s. The in-country programs in Cambodia, Lao PDR, and Vietnam have proven effective in training new researchers and in working with government agencies. This approach will be continued in these countries and extended to other countries, starting with Indonesia, Thailand and the Philippines.



- A suggestion in the 2005 evaluation was for EEPSEA to help build a “*community of environmental economists*” in the region, this being critical to the sustainability of environmental economics beyond the life of EEPSEA.

### ***Future Directions for EEPSEA***

From the foregoing analysis, it is clear that the menu of programs offered by EEPSEA over the past fourteen years has been effective in building capacity. What remains to be done is to enhance certain aspects of EEPSEA’s strategies to provide support to institutions as well as individual researchers. To achieve this, it will focus its activities on four areas in the coming years:

#### **a) Localizing Capacity-Building and Increasing In-Country Support**

If EEPSEA has built a cadre of environmental economists in the region, then this could be used as a pool of resource persons for more junior researchers.

We believe it is possible for researchers from high-capacity countries like the Philippines, Vietnam, and China to serve as resource persons to support research and training in other countries in SEA. This process has been implemented in Vietnam, Lao PDR and Cambodia since 2005 and will continue. Reliance on international resource persons, particularly in regional activities, will be pursued simultaneously, since their role in ensuring high quality research has been critical to EEPSEA’s success to date.

#### **b) Strengthening Local and Regional Institutions**

##### ***i) A Community of Environmental Economists***

One of the recommendations of the Vincent and Hirsch evaluation was for EEPSEA to “*help strengthen the Southeast Asian community of environmental economists*”. A community of such professionals interacting with each other within and across countries is critical to the sustainability of the profession. In some countries (Vietnam, the Philippines, Malaysia, and China), environmental economics associations already exist, most with support from EEPSEA. EEPSEA will seek to strengthen the partnerships with these local associations and build their capacity to sustain the professional growth of their members and enable them to eventually carry out their own research and training independently.

Institutional strengthening, however, should focus not only on the community of environmental economists but also on new partners or stakeholders such as policy-makers, the media, and advocacy and environmental groups. “Institution” is defined in the Websters Dictionary as “*a significant practice, relationship, or organization in a society or culture*”. In this paper, we define institution as a relationship or partnership. In addition to partnerships between environmental economists, we have identified three other partnerships that need strengthening by EEPSEA:

## ***ii) Linking Environmental Economists and Policy-makers***

First, the link between the community of environmental economists and policy-makers should be strengthened. One may ask to what extent EEPSEA products and experts are linked to environment ministries and other relevant organizations in the various countries.

The Vietnam Environmental Economics Association (VEEA) conducts yearly professional meetings and invites policy-makers to these meetings. A number of policy-makers are themselves members of VEEA. EEPSEA Policy Briefs are also regularly communicated to policy-makers in Vietnam. So, for Vietnam at least, a good linkage between researchers and policy-makers exists. Such connections are less developed in the Philippines and Thailand.

EEPSEA will implement activities to link EEPSEA research outputs and researchers more directly to environment ministries. This will entail research support to environment ministries, with EEPSEA-trained researchers acting as resource persons. This process is expected to build local capacity in environmental economics research in government while fostering closer relationships between EEPSEA-trained researchers and policy-makers in order to bring about governmental policies and initiatives that are environmentally sustainable and sound.

## ***iii) Linking Environmental Economists and Environmentalists***

EEPSEA works in Southeast Asia, where many other regional organizations are similarly engaged in research and development on natural resources. Among those working on forests are the Centre for International Forestry Research (CIFOR) based in Bogor, Indonesia; The World Agroforestry Centre, also in Bogor; and the FAO regional office in Bangkok. For marine resources, there are the World Fish Centre and the South China Sea Program, both in Bangkok; and the International Marine Organization (IMO) in the Philippines. Organizations that train environmental managers and policy-makers include the SEAMEO Regional Centre for Graduate Study and Research in Agriculture (SEARCA) in the Philippines and the UN Economic and Social Commission for Asia and the Pacific (ESCAP) in Thailand. EEPSEA will establish closer linkages with these organizations through joint courses and participation in conferences.

## ***iv) Linking Environmental Economists and Media/Advocacy Groups***

The link with media and advocacy groups will also be strengthened as a strategy to mobilize public and government support for research that supports improved environmental management. Environmental economics aims to influence the behavior of producers/firms and consumers by changing the incentives that they face (mostly through prices but also through social pressure). Involving the media in disseminating research can make these economic agents more socially responsible, create public awareness and capture the attention of policy-makers.

### **c) Supporting National and Regional Research Projects**

EEPSEA has supported nearly 200 single-country research projects. It will continue to support research that meets national priorities, while also encouraging projects that address regional issues.

EEPSEA's first work on a regional scale was done with WWF-Indonesia in 1998 – it focused on the haze problem brought about by forest fires in Indonesia. EEPSEA estimated the loss of forest resources and trans-boundary health impacts of the problem. The results were used in countless policy and media discussions. Since the haze is an ongoing concern, EEPSEA will continue to look for ways to contribute to establishing the causes of and solutions to this shared environmental problem.

In 2005-2006, EEPSEA supported a cross-country research project on *Eliciting Willingness to Pay for Endangered Species Conservation in China, Thailand, the Philippines and Vietnam*. Results were presented at the Kyoto World Congress of Environmental Economists in 2006 and at a conference for conservation groups in July 2007.

In its May 2007 biannual workshop, EEPSEA launched a set of research projects on the economics of adaptation to extreme climate events, focusing initially on sea level rise. Research studies on the adaptation and mitigation measures by households, communities, and local and national governments to climate change impacts and the mitigation of climate change will be important areas of focus for EEPSEA research projects in the coming years. The aim is to contribute to improving the capacity of local government units, households and communities, particularly the poor communities of society, in dealing with this unavoidable event. Other focus areas for regional focus of research will include the persistent haze problem in the region, trans-boundary water issues in Mekong, and research on biofuels.

### **d) Linking with Other Projects of EEPSEA's Sponsors**

Donors like to see the programs they support linked with one other to achieve synergy. In the context of EEPSEA, this could mean providing technical expertise to other programs and/or drawing on those programs for expertise needed by EEPSEA researchers. Joint training and research are also possibilities. While EEPSEA has always been open to such collaboration, resources may need to be allocated to make it a reality (e.g., by hiring additional senior economists for EEPSEA).

## **Annex A**

### **EEPSEA'FIRST FOURTEEN YEARS: A STATISTICAL SUMMARY**

Herminia Francisco

(Statistics current as of March 2007)

#### **Introduction**

EEPSEA was established in May 1993 to support training and research in environmental and resource economics. Its goal is to strengthen local capacity for the economic analysis of environmental problems so that researchers can provide sound advice to policy makers. The program provides not only financial resources for research and training to researchers in its 10 member countries, it also makes possible access to resource persons, literature, and the scientific community through networking approach and support to conferences. EEPSEA also provides opportunities for comparative research across its member countries.

The theme of our research program is the internalisation of external costs and the improvement on how environment and natural resources are managed. There is widespread interest in minimizing pollution and resource degradation by ensuring that economic agents face the full costs of their activities and are aware of the tradeoffs involved in resource management options. EEPSEA research aims to provide such information to decision makers.

EEPSEA is now into its 14<sup>th</sup> year of existence. Over this lifetime, it has undergone three external evaluations (1996 by Mohan Munasinghe; 2000 by

Dan Bromley & Gelia Castillo; and 2005, by Jeff Vincent & Phil Hirsh). These evaluations looked at both project impacts and quality of research output. In all these evaluations, the conclusion is that EEPSEA has been successful in contributing to capacity building efforts and generation of policy relevant research in its member countries.

This short report is not an evaluation of EEPSEA work. That task is better left to an external evaluator. What it is—is simply an inventory and analysis of what it has done over the 14 years of its operation in terms of the “People” it has trained; the “Products” (research reports) it has produced, and who its

“partners” are in the region. It hopes to draw some lessons that could guide directions for future work of EEPSEA in the region with a caveat that future programming should also consider what other environmental economics research organizations have done and/ are doing in these countries, what the existing gaps are in terms of environmental economic research, and the priority areas/countries of its donors.

#### **People we have trained**

EEPSEA's first two years of training activities were limited to sponsoring researchers to attend the Environmental Economics & Policy Analysis course at the Harvard Institute for International

Development (HIID), the Environmental Economics course of the Gothenburg University, and other similar courses, in various parts of the world. EEPSEA still offers limited support to participation in these non-EEPSEA training courses. To date, it has supported participation of 44 researchers to these international training courses.

In 1995, EEPSEA offered its first 3-week course in Environmental Economics in Vietnam, followed by

another course in 1996. The participants came from government and Universities. Graduates of these courses were then encouraged to develop research proposals in teams. These research projects were published as a book (Economy and Environment: Case Studies in Vietnam) that was subsequently used as teaching material in Vietnam. Similar courses were offered in Cambodia and Lao PDR in 2000 and 2001, respectively.

Table 1. Courses offered by EEPSEA (1995-2007)

| Training Courses                          | Freq | Year      | Target Group                    | No of Participants |
|-------------------------------------------|------|-----------|---------------------------------|--------------------|
| <b>Regional Courses</b>                   |      |           |                                 |                    |
| 4-week Environmental Economics            | 7    | 1996-2006 | Univ., Research units-GO & NGOs | 185                |
| Pollution Science for Economists          | 2    | 1999,2004 | mostly EEPSEA researchers       | 46                 |
| Econometrics Course                       | 1    | 2001      | mostly EEPSEA researchers       | 22                 |
| Contingent Valuation Course               | 1    | 2004      | mostly EEPSEA researchers       | 30                 |
| Forestry Science for Economists           | 1    | 2000      | mostly EEPSEA researchers       | 25                 |
| Marine Science for Economists             | 1    | 2001      | mostly EEPSEA researchers       | 17                 |
| Climate Change and CDM                    | 1    | 2003      | mostly EEPSEA researchers       | 26                 |
| Policy Analysis                           | 1    | 2006      | mostly EEPSEA researchers       | 29                 |
| <b>In-Country Courses</b>                 |      |           |                                 |                    |
| 3-week EE course in Vietnam               | 2    | 1995;1996 | Univ, research units-GO & NGOs  | 50                 |
| 3-week EE course in Cambodia              | 1    | 2000      | Univ, research units-GO & NGOs  | 25                 |
| 3-week EE course in Laos                  | 1    | 2001      | Univ, research units-GO & NGOs  | 28                 |
| Economics of Pollution Control in Beijing | 1    | 2005      | Univ, research units-GO & NGOs  | 22                 |
| Resource Econ Course in Beijing           | 1    | 2003      | Univ, research units-GO & NGOs  | 24                 |
| <b>Vietnam, Lao PDR, Cambodia Courses</b> |      |           |                                 |                    |
| 3-week EE teachers course in Vietnam      | 1    | 2005      | University teachers             | 27                 |
| 1-week EE overviewcourse for LC           | 1    | 2005      | researchers of target agencies  | 30                 |
| 1-week CBA course for VLC                 | 1    | 2005      | researchers of target agencies  | 27                 |
| 1-week CVM course for LC                  | 1    | 2006      | researchers of target agencies  | 27                 |
| 1-week course for VN policy makers        | 1    | 2006      | policy makers                   | 30                 |
| 1-week course for Lao policy makers       | 1    | 2006      | policy makers                   | 30                 |
| 1-week EE course for NGOs                 | 1    | 2007      | NGOs-researchers & advocacy     | 21                 |
| <b>Total Attendees</b>                    |      |           |                                 | <b>721</b>         |

EEPSEA then offered its first 4-week Regional Environmental Economics course in 1997 in Los Banos, Laguna, Philippines. The course was offered every year in the next four years and

every other year, starting in 2000. One hundred eighty-five (185) researchers were trained in the seven regional training courses so far.

EEPSEA also offered specialized courses on both the tools of economics (e.g. econometrics) and the science of forestry, marine and pollution control, and practical skills like effective writing and fund-raising. It also sponsored appreciation courses for policy makers in Lao PDR and Vietnam. In 2005, EEPSEA began to provide support for non-academic institutions in Vietnam, Lao PDR, and Cambodia—an effort that will be expanded to other EEPSEA-member countries in the next 3-5 years. To date, EEPSEA has trained 721 individuals in its various training programs.

In addition to these training courses, EEPSEA has also sponsored the participation of 30 researchers at various international conferences and provided 10 post-doctoral awards over the years.

Given the wide range of training courses that EEPSEA offers, it is possible for one researcher to attend more than one EEPSEA course. This is consistent with the aim of EEPSEA to help develop well-rounded researchers, conversant not only in the theory and tools of Environmental Economics but in related sciences as well.

About 20% of those trained have been to two or more courses. Accounting for multiple-attendance at EEPSEA courses, the Program has trained 533 individuals to date (Table 2).

Table 2. EEPSEA Course Participants and Course Attendees (1993-2007)

| Number of Training Courses Attended | Number of Participants | % To total number of individuals trained |
|-------------------------------------|------------------------|------------------------------------------|
| One                                 | 421                    | 79.0                                     |
| Two                                 | 66                     | 12.4                                     |
| Three                               | 25                     | 4.7                                      |
| Four                                | 11                     | 2.1                                      |
| Five                                | 6                      | 1.1                                      |
| Six                                 | 2                      | 0.4                                      |
| Seven                               | 1                      | 0.24                                     |
| Total attendees                     | 721                    |                                          |
| Total individuals trained           | 533                    | 100                                      |

Bulk of the training activities of EEPSEA have been directed to Vietnam, Lao PDR and Cambodia. In the case of Vietnam, the high level of training translates to more research projects, with Vietnam ranking 2<sup>nd</sup> in number of projects supported by EEPSEA. For Lao PDR and Cambodia, the first training course in 2000/2001 did not yield more projects—due largely to limited interest and very low research capacity at that time. The Vincent and Hirsch (2005) evaluation suggested that EEPSEA should explore building capacity in organizations with ‘research culture’ in these two countries. This recommendation was followed with the posting of the EEPSEA Deputy Director to Phnom Penh, Cambodia in 2005. This effort proves to be successful in getting a group of researchers from 6 institutions in these countries engaged in environmental economics research. The countries with the least participants are PNG, Indonesia & Malaysia. This was mainly because not many from these countries have applied to these courses. In addition, we have not designed in-

country courses for any of these countries either, but this is also true for Sri Lanka and Thailand.

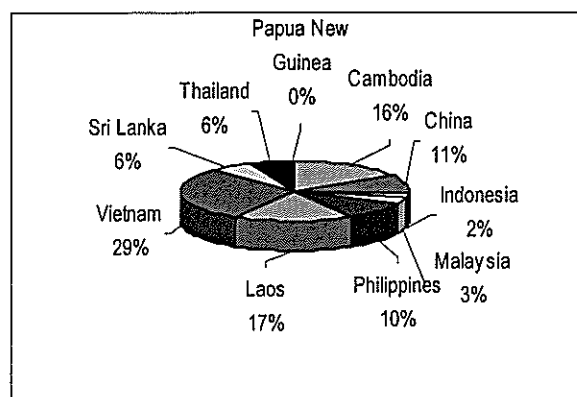


Figure 1: Distribution of Course Participants by Country (1995-2007)

### Research projects we have funded

The number of research projects funded by EEPSEA by year varies from 7 to 24 over 1994-2006, with an annual average of 14. The years with the most number of projects were in 1997, 2000 and 2006 (Figure 2). The high number of research projects in 1997 was due to the Small Research Grant Program in Vietnam for graduates of the 1995-96 environmental economics courses. Likewise, a similar program was launched for Vietnam, Lao PDR, and Cambodia in 2006

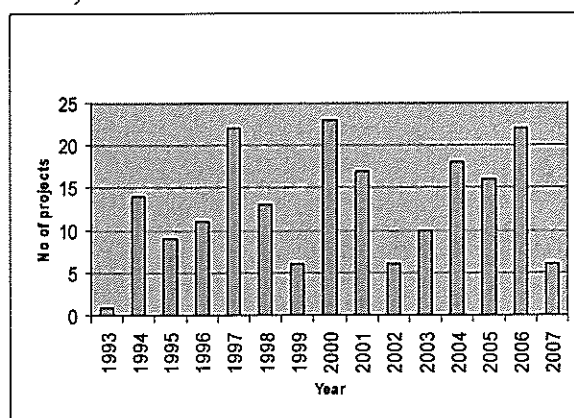


Figure 2: Distribution of Research Projects by Year (1993-2007)

There were 194 projects funded by EEPSEA since 1993. Of this number, the largest came from the Philippines, Vietnam and China. The fewest projects were from PNG, Malaysia, Lao PDR, Sri Lanka and Indonesia.

The number of projects coming from Vietnam and the Philippines drive the pattern of research submission over time. Both countries had the most submission in 1997, 2000 and 2006 as well. Lao PDR and Cambodia submissions grew in 2006 as a result of the Small Research Grant Programs initiated in these countries and we expect the number to increase further with another Small Research Grants Program lined up for these two countries in 2007-2008.

Table 3. Number of Research Projects over the years by country (1993-2007)

| Country     | No  | %   |
|-------------|-----|-----|
| Cambodia    | 13  | 7   |
| China       | 35  | 18  |
| Indonesia   | 15  | 8   |
| Lao PDR     | 7   | 4   |
| Malaysia    | 6   | 3   |
| Philippines | 45  | 23  |
| PNG         | 2   | 1   |
| Sri Lanka   | 11  | 6   |
| Thailand    | 21  | 11  |
| Vietnam     | 39  | 20  |
| Total       | 194 | 100 |

The number of research projects from Malaysia, Sri Lanka and Indonesia has been consistently low with zero submission in some years. This is not a cause of concern however as Malaysia is a low priority country that has 'graduated' from the eligibility list of most donors. Sri Lanka is eligible for

grants from SANDEE and has probably received support for these in 'zero submission' years. Two visits in Indonesian Universities did not succeed in getting more researchers from this country. The few who received research grants from EEPSEA are PhD students studying either in Australia or the US. We have definitely received some more proposals but they are either of really poor quality or on topics not falling within the field of environmental economics.

An analysis of the topical focus of the research grants (Table 4) shows that countries in Southeast Asia have been mostly concerned with problems related to forest management and urban pollution.

**Table 4. Distribution of EEPSEA-Funded Research Projects by Area**

| Research Area                           | Total | %   |
|-----------------------------------------|-------|-----|
| Forest Resource Mgt                     | 56    | 29  |
| Urban Pollution: air & water            | 31    | 16  |
| Water Management                        | 21    | 11  |
| Fishery/Marine Resource Mgt             | 20    | 10  |
| Rural/agric/livestock Pollution         | 20    | 10  |
| Economy-wide, trade lib & Global Issues | 15    | 8   |
| Energy & Resource Pricing               | 14    | 7   |
| Solid waste Management                  | 7     | 4   |
| Env'tal Disaster/Mining                 | 6     | 3   |
| Cultural Heritage                       | 4     | 2   |
| Total                                   | 194   | 100 |

A country analysis of the research projects supported by EEPSEA is shown in Table 5. The level of EEPSEA research support varies substantially in number across countries and in topics within a country. In countries with the most number of research projects

(Philippines, Vietnam, and China) research topics cover a wide range of issues on forestry, urban pollution, agriculture, water resources and coastal resources. It would appear that for the Philippines and Vietnam, in particular, EEPSEA could spearhead an analysis of what we have learned from these studies and assess if it is possible to come up with some advise on 'best practices or policies' with regards certain environmental concerns in these countries. These analyses could be useful for other countries as well.

**Table 5: Country Focus: Environmental and Natural Resource Issues Covered by EEPSEA Research**

| Country     | Research Topic                                  | Number of Projects |
|-------------|-------------------------------------------------|--------------------|
| Philippines | Forestry Issues                                 | 7                  |
|             | Coastal Resources                               | 5                  |
|             | Solid Waste Management & Air Pollution          | 10                 |
|             | Livestock, Agriculture & Fisheries              | 7                  |
|             | Water Pollution & Environment Disasters         | 12                 |
|             | F. Water Management                             | 4                  |
| Vietnam     | Forestry, Upland & Protected Areas              | 14                 |
|             | Water Resource Mgt. & Pollution                 | 7                  |
|             | Agriculture, Livestock & Fishery                | 6                  |
|             | Coastal, Wetlands & Cultural Heritage           | 6                  |
|             | Air Pollution & Energy Mgt                      | 4                  |
|             |                                                 |                    |
| China       | Agriculture, Land Degradation & Pesticides      | 7                  |
|             | Water Issues                                    | 10                 |
|             | Forestry Issues                                 | 6                  |
|             | Air Pollution                                   | 5                  |
|             | Energy and Climate Change                       | 3                  |
|             | Trade, Taxation and Environment                 | 3                  |
| Thailand    | Natural Resources: Forestry, Mangroves & Marine | 7                  |
|             | Air and Water Pollution                         | 5                  |



|           |                                      |   |
|-----------|--------------------------------------|---|
|           | Protected Areas & Endangered Species | 4 |
|           | Water Resources                      | 4 |
| Indonesia | Air & Water Pollution                | 5 |
|           | Forestry & Mining                    | 4 |
|           | Water and Agriculture                | 5 |
| Sri Lanka | Air & Water Pollution                | 4 |
|           | Forestry & Mining                    | 6 |
| Cambodia  | Forestry & Protected Areas           | 7 |
|           | Water Resources & Pollution          | 3 |
| Lao PDR   | Forestry & Upland Resources          | 4 |
|           | Water Resources & Pollution          | 2 |
| Malaysia  | Forestry Issues                      | 4 |
|           | Solid Waste Management               | 1 |

What Table 5 further highlighted is the big difference in capacity across countries. While EEPSEA seems successful in building a cadre of researchers in countries like the Philippines, Vietnam and China (though relative to the size of China, this number is really still very small), it still has to help build capacity in other countries like Cambodia and Lao PDR. On the positive side, it has now pool of Asian experts who can help in this task.

The 194 research projects were also classified by type of analysis or tools used, though the classification is indistinct in several cases. Policy analysis dominates at 24%. This includes evaluation of a government program, policy, or economic activity that may impact the environment and evaluation of possible management options to address a given natural resource situation. The next dominant group of research projects involved valuing environmental impacts (18%).

In terms of trends in research focus, impact and benefit valuation studies are more popular in the early phase of EEPSEA. After 2000, policy analysis works and evaluation of economic instrument and pollution control options were more popular. This reflects the increasing emphasis put by EEPSEA on policy relevant studies. Contingent valuation gained popularity from 2000, with the number peaking up in 2005, following the EEPSEA short course on this subject.

**Table 6: Number of projects by Analytical Approach (1993-2007)**

| TOOLS                                   | 93-95 | 96-97 | 98-01 | 02-04 | 05-07 | Total | %   |
|-----------------------------------------|-------|-------|-------|-------|-------|-------|-----|
| Policy Analysis                         | 3     | 6     | 18    | 8     | 11    | 46    | 24  |
| Impact Valuation                        | 4     | 9     | 10    | 5     | 6     | 34    | 18  |
| Economic instruments/ Pricing           | 7     | 7     | 4     | 7     | 1     | 26    | 13  |
| Explicative Research                    | 3     | 4     | 8     | 2     | 7     | 24    | 12  |
| Contingent Valuation & Choice Modelling | 0     | 1     | 7     | 4     | 1     | 23    | 12  |
| Pollution Control-economic analyses     | 4     | 3     | 3     | 5     | 3     | 18    | 9   |
| Institutional Analysis                  | 1     | 2     | 3     | 3     | 3     | 12    | 6   |
| Benefit Valuation                       | 2     | 6     | 2     | 0     | 0     | 10    | 5   |
| Benefits Transfer                       | 1     | 0     | 0     | 0     | 0     | 1     | 1   |
| Total                                   | 25    | 38    | 55    | 34    | 42    | 194   | 100 |

Overtime, a researcher can receive more than one research award from EEPSEA, though at any given time, a researcher can have only one on-going project. To receive a second or third award, the researchers must address an important environmental concern; do a research that requires higher analytical skills; bring in some junior researchers that they could train through the project; have a clear publication plan for their project, or a combination of the above.

Of the 159 project leaders, 63% have attended EEPSEA courses while 7% have been awarded EEPSEA grants to attend training courses offered by other organizations. About half of the research projects of EEPSEA have 2 or more members, so the researchers doing EEPSEA research is much higher than 159. There are 30% of the researchers of EEPSEA who have not received any training from EEPSEA. Most of these people are PhD students from Universities in the USA, Canada, Australia and Europe. Some are senior researchers from the region who may have no need for further training.

Table 7. Distribution of Researchers by Number of Research Projects

| NUMBER OF FUNDED PROJECTS                                                                 | Freq | %   |
|-------------------------------------------------------------------------------------------|------|-----|
| 3 projects                                                                                | 5    | 3   |
| 2 projects                                                                                | 25   | 16  |
| 1 project                                                                                 | 129  | 80  |
| Total number of project leaders                                                           | 159  | 100 |
| Total number of research projects                                                         | 194  | -   |
| Total number of projects under the Small Research Grants in Vietnam, Lao PDR and Cambodia | 22   | 8   |

Table 8. Distribution of Researchers with EEPSEA Training (1993-2007)

| Classification                                            | Number | %   |
|-----------------------------------------------------------|--------|-----|
| Research leaders with EEPSEA training                     | 100    | 63  |
| Research leaders sponsored by EEPSEA for foreign training | 11     | 7   |
| Research leaders without EEPSEA training/support          | 48     | 30  |
| TOTAL NUMBER OF RESEARCH LEADERS                          | 159    | 100 |

Two-thirds of EEPSEA researchers are from Universities while close to a fifth came from research institutions. About 10% are from government agencies and a very small proportion are free-lance consultant cum researchers, affiliated mostly to research institutions in their countries.

### Our research and training 'partners'

The term 'partners' is used here loosely to refer to collaborators in implementing EEPSEA activities in the various countries. For training courses and/or joint conferences, we have collaborated with SEARCA and the World Agroforestry for regional courses. For in-country courses, REECS (Philippines), EEU (Vietnam), CBNRM-LI and CDRI (Cambodia) and ERI (Lao PDR) have partnered with us. For the translation of EEPSEA policy briefs in local language, our partners are NUOL in Lao PDR, NongLam University and Hue University in Vietnam, Land Policy Study Forum in Thailand and CDRI in Cambodia. The absence of local collaborators in

countries like Malaysia, Indonesia and Sri-Lanka also signifies the absence of in-country activities by EEPSEA in these countries.

## Our publications

EEPSEA Research Reports are published in our website with about 200 hard copies for distribution to libraries in the region and outside and for the researcher's own distribution. A 4-page Policy Brief that puts the findings and recommendations in layman's terms for wider distribution accompanies each report.

There is also a series of Special Papers emphasizing methodology and Technical Papers Series consisting of final reports of a more technical nature. These have not been edited and are aimed more at researchers than the general public.

Table 9: EEPSEA Collaborators in Member-countries

| Country     | EEPSEA "Partners"                                                                   |
|-------------|-------------------------------------------------------------------------------------|
| Philippines | Resources, Economics, Environment, Center for Studies (REECs)                       |
|             | Department of Economics, University of the Philippines, Los Banos (UPLB)            |
| Vietnam     | Environmental Economics Unit (EEU) University of Economics HCMC                     |
|             | Vietnam Environmental Economics Association, Hanoi (VEEA)                           |
|             | Nong Lam University, Hochiminh City                                                 |
|             | College of Economics, Hue University,                                               |
| Thailand    | Land Policy Study Forum with grant from 0                                           |
| China       | Center for Chinese Agricultural Policy (CCAP) Chinese Academy of Sciences           |
| Cambodia    | Cambodia Development Resource Institute (CDRI)                                      |
|             | Community-based Natural Resource Management-Learning Institute (CBNRM-LI)           |
| Lao PDR     | Environment Research Institute (ERI), STEA                                          |
|             | National University of Laos (NUOL)                                                  |
| Regional    | Seameo regional Center for Graduate Study & Research in Agriculture (SEAMEO-SEARCA) |
|             | World Agroforestry Research Center in Bogor Indonesia                               |
|             | World Wildlife Fund (Indonesia)                                                     |