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Annual Report
July 1, 2005 to June 30, 2006

October 2006

EPSEA is supported by a consortium of donors and administered by IDRC.

22 Cross Street #02-55, South Bridge Court, Singapore 048421

Tel: (65) 6438 7877 • Fax: (65) 6438 4844

Website: <http://www.eepsea.org>

E-mail: dglover@idrc.org.sg • Deputy Director: hfrancisco@idrc.org.sg



EEPSEA Annual Report
July 1, 2005 - June 30, 2006

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David Glover, Director
October, 2006

Annual Report

July 1, 2005 - June 30, 2006

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 for the economic analysis of environmental problems so that researchers can provide sound advice to policymakers. The program uses a networking approach to provide not only financial support but meetings, resource persons, access to literature, publication outlets, and opportunities for comparative research across its ten member countries. These are Thailand, Malaysia, Indonesia, the Philippines, Vietnam, Cambodia, Lao PDR, China, Papua New Guinea and Sri Lanka.

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 and Cambodia. EEPSEA is a project administered by the International Development Research Centre (IDRC) on behalf of the Sponsors Group.

Typically, researchers learn about EEPSEA by 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 24,000-35,000, depending on the country. Researchers may be affiliated with a university, government or non-government organization and grants are normally made to that institution. Most projects are carried out by teams of researchers.

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. To date, EEPSEA has provided training to some 685 people and supported 175 research projects.

2. HIGHLIGHTS

As always, 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. Fifteen new projects were funded and five courses offered.

With the relocation of EEPSEA's Deputy Director to Phnom Penh, Cambodia in July 2005, EEPSEA has launched a series of activities in Cambodia, Lao PDR and Vietnam. Since then, we have, inter alia, held a three-week course for Vietnamese professors of environmental economics; followed this with a workshop to develop research projects; offered a course on Research Methods in Environmental Economics for Cambodian and Laotian researchers; launched a seminar series on current issues in environmental economics with the Cambodia Development Resource Institute; and begun to translate EEPSEA Policy Briefs into Khmer and Laotian.

3. REGIONAL TRAINING ACTIVITIES

a) Environmental & Resource Economics

EEPSEA's advanced three-week core course in environmental and resource economics is offered in even-numbered years. It last took place in April 6-28 in Chiang Mai, Thailand. The course is taught by a team of international instructors and covers such topics as cost-benefit analysis, pollution control, non-market valuation, resource management and proposal preparation. This year's instructors were **Benoit Laplante**, **Anton Meister** and **Nancy Olewiler**.

b) Policy Analysis for Environmental Economists

From May 9-13, 2006 (immediately before the biannual workshop), EEPSEA offered a course to help researchers identify and address policy issues through research. Topics covered included criteria for assessing policy alternatives; drawing conclusions from evidence; and incorporating the human dimension in policy analysis.

In addition to attending lectures, participants undertook group case studies that lasted the duration of the course. The textbook used was Eugene Bardach, *A Practical Guide for Policy Analysis: The Eightfold Path to More Effective Problem Solving*. The course was designed by **Nancy Olewiler** (Simon Fraser University, Canada) and **Dale Whittington** (University of North Carolina, USA) and taught (because of Nancy's absence due to illness) by Hermi Francisco, David Glover and Dale.

c) Postdoctoral Award

Junlian Zhang spent five months at the University of Calgary in Canada taking graduate courses in economics. He also attended the Ronald Coase Institute Workshop in Institutional Economics and the Society for New Institutional Economics Conference in September. The papers Junlian gave at the workshop and conference were related to his EEPSEA work on barriers to water markets in Northwest China.

4. REGIONAL RESEARCH AWARDS

Fifteen projects were approved, two of which were PhD thesis awards.

1. Anabeth L Indab
Conservation Value of Endangered Species in the Philippines: A CVM Exercise
2. Jin Jianjun
Comparative Study of Endangered Species Conservation in Southeast Asia: Black-faced Spoonbills and Marine Turtles
3. Truong Dang Thuy
Willingness to Pay for Conservation of Endangered Species in Vietnam: Rhino and Sea Turtles
4. Rodelio F Subade
Economic Valuation of Conserving Endangered Species and Their Habitats in the Northwest Panay Peninsula, Philippines
5. Orapan Nabangchang
Comparative Study on Endangered Species Conservation in Southeast Asia, Thailand
6. Ye Chunhui
Cost of Financing Solid Waste Management in Rural China
7. Ma Angeles O Catelo
Impact Evaluation of the Environmental User Fee System: A Stakeholder Perspective
8. Beria Leimona
Analysis of Minimum Compensation to the Providers in a Reward for Environmental Services Scheme
9. Thang Nam Do (PhD thesis)

Impacts of Dykes on Wetland Values in Vietnam's Mekong Delta: A Case Study in the Plain of Reeds

10. Rosalina Palanca-Tan
The Valuation of a Statistical Life (VOSL) Inferred from Willingness-to-Pay (WTP) for a Dengue Hemorrhagic Fever (DHF) Vaccine for Children in Metro Manila
11. Rodelio F Subade
An Environmental Impact Assessment of an Oil-Spill Incident in Semirara Island, Caluya, Antique: Socio-Economic Valuation Component
12. Nguyen Van Hanh
Clean Development Mechanism Design for a Rice Husk-Fuelled Bio-Power Project in Mekong Delta, Vietnam
13. Arief Anshory Yusuf (PhD thesis)
The Distributional Impact of Environmental Policies: The Case of Carbon Tax and Energy Price Reform in Indonesia Using Micro-Simulation CGE Model
14. Luthfi Fatah
The Impacts of Coal Mining on the Economy and Environment of South Kalimantan Province, Indonesia
15. Phouphet Kyophilavong
Impacts of Smallholder Irrigation on Resources – A Case Study of That Luang Marsh, Vientiane, Laos

5. BIENNIAL WORKSHOPS

The format for these workshops is 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 mix 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 rehearsal of the working group presentations, to make sure the presentation is clear and complete. This should make it easier for the other participants to offer useful questions and comments, rather than clarifying things they didn’t understand.

The Day 4 bilateral sessions are wrap-up session with the researcher and advisor, to clarify any matters remaining from previous days’ discussions. These meetings also serve to establish a personal contact between the advisor and the author, which they can pursue by E-mail over the coming months.

The deadlines for proposals are: *February 1* for the May workshop and *August 1* for the November workshop. Deadlines for interim and final reports are *April 1* for the May workshop and *October 1* for the November workshop.

a) **November 2005 Biannual Workshop**

The twenty-fourth biannual workshop was held at the Angkor Century Hotel in **Siem Reap, Cambodia** and included two plenary sessions and a day of concurrent sessions for presentations by researchers. The location was chosen in part to reflect EEPSEA’s renewed emphasis on Cambodia, Lao PDR and Vietnam.

Karl-Goran Maler talked about *non-convexities in eco-systems*, citing many examples of ecosystems that have responded to human influence in ways that are abrupt, discontinuous or irreversible. Some lakes have eutrophied to the point that simply ceasing to pollute them will not bring them back to life. Fish stocks can be depleted to the point that they can no longer recover, even if fishing ceases. Positive feedbacks can occur, for example if global warming melts permafrost in the arctic, releasing methane - a powerful greenhouse gas. While economists are accustomed to dealing with marginal, reversible changes, our assumptions and methods may need to be adjusted when dealing with such ecosystems. Collaboration with natural scientists is important to insure that economic models correspond with physical reality.

Thanakvaro de Lopez presented interim results from his EEPSEA study of the *impact of tourism* on the environment and local livelihoods in the Angkor Wat area. He has found that while employment has been generated by the booming hotel industry, it is unevenly distributed - the jobs tend to go to immigrants from Phnom Penh, since local people lack the language skills and experience to work in the hotels. Some villagers have increased their incomes by selling souvenirs, but those who do so to the extent of abandoning agriculture risk hard times when tourism faces the inevitable shocks caused by recession, or fears of bird flu or terrorism. Deforestation has so far not been a big problem, but demand for water from the big hotels merits attention.

The last plenary session discussed strategies for *publication in journals*. This was a response to requests from researchers at a previous workshop for tips about how to prepare articles; which journals to submit them to; how to respond to referees’ comments;

and how to maximize the publication output from a single research project. Resource persons and published EEPSEA authors addressed these questions and shared their publication experiences. Information from the session will be distilled and repeated in short sessions for future cohorts of EEPSEA researchers.

b) May 2005 Biannual Workshop

The twenty-fifth biannual workshop was held in Singapore and included one plenary lecture session, a participatory session dealing with public goods and concurrent sessions for presentations by researchers.

The opening plenary session presented the results from a cross-country comparative research project carried out by EEPSEA researchers from Vietnam, China, Thailand and Philippines. Using a common survey instrument, the researchers applied the contingent valuation method to assess the *willingness of local populations to pay for the conservation of several endangered species*. The countries studied include several of the world's biodiversity hot spots.

Each country team examined a species of local interest (rhinoceros in Vietnam, whale shark in Philippines and spoonbill in Macau, China), as well as one species of regional interest (marine turtle, in all three countries). The survey instrument included an extensive attitudinal survey and was supplemented by experiments to assess risk aversion, time preference and the difference between actual and stated willingness to pay. The effects of payment vehicle on willingness to pay (WTP) were also explored.

Although the average willingness to pay of urban households was found to be relatively low, the potential for revenue generation is significant because of the size of Asia's urban population. Moreover, the payment vehicle employed in the study - a surcharge on electricity bills, either mandatory or voluntary - appears to be feasible and acceptable to households. This could overcome one of the most significant problems in mobilizing potential willingness to pay.

Perhaps surprisingly, the attitudinal surveys found that households are well-informed about endangered species and are exposed to considerable information about them through television documentaries and the like. However, they regard problems such as poverty and governance as more significant. The potential to increase environmental awareness and willingness to pay through information campaigns, a common focus of donor efforts - is thus rather unpromising. The study concluded that a better approach is to mobilize existing willingness to pay by identifying effective and trustworthy payment mechanisms.

The closing plenary session involved an *experiment with public goods*, run by Vic Adamowicz and based on work by Holt & Laury.

Workshop participants were divided into three groups and given coupons, then instructed to anonymously donate as many coupons as they wished to a common pot. Participants' winnings consisted of the coupons they retained plus a share of the coupons donated. The rules of the game were such that participants could maximize their earnings by donating rather than retaining coupons - as long as all the other participants did so as well.

The participants were divided into three groups, each operating under different rules. Each group ran up to 30 repetitions of the game. The group that was allowed to communicate and develop its own participation rules (e.g. waiving anonymity) gravitated toward a revenue-maximizing outcome. Somewhat surprisingly, the group that could communicate but not change the rules did no better than a non-communicating group. Discussion followed to draw out the relevance of the experiment for the design and management of programs to provide public goods.

6. VIETNAM, LAO PDR, CAMBODIA PROGRAM

In July 2005, EEPSEA's Deputy Director, *Hermi Francisco*, set up office at the Cambodia Development Resource Institute (CDRI) in Phnom Penh, Cambodia. The purpose of this move was to provide more effective support to local researchers by getting directly involved with local institutions in designing their capacity building programs in environmental economics.

In the first two months, EEPSEA consulted with relevant agencies working on environment and natural resource (ENR) issues in the three countries. The visits helped identify priority areas of concern for environmental economics research in the various agencies, assess existing capacity for such an undertaking, and identify how this research capacity could be enhanced.

EEPSEA formed partnerships with CDRI, the Ministry of Environment (MoE), the Community-based Natural Resources-Learning Institute (CBNR-LI), and the Royal University of Phnom Penh (RUPP) in Cambodia. In Lao PDR, local partners include the Environment Research Institute of the Science, Technology and Environment Agency (ERI-STE), the National Agriculture and Forestry Research Institute (NAFRI) and the National University of Laos (NUOL). For Vietnam, EEPSEA directed support to selected universities and to the Ministry of Planning and Investment (MPI), which in turn collaborates with the Ministry of Natural Resources and Environment (MoNRE).

The program of activities identified by the various institutions consists of small research grant programs and training - the kind of activities EEPSEA has been providing for many years. The main difference is that these training programs are tailored to the research needs of the potential users.

In addition to training and research grants, EEPSEA launched a Seminar Series in Cambodia. The translation of EEPSEA Policy briefs, an activity long underway in Vietnam, was initiated in Cambodia and Lao PDR. Courses for policy makers in ENR in Vietnam and Lao PDR have also been scheduled.

The following are activities carried out under the VLC subprogram from July 2005 to June 2006.

a) Cambodia Seminar Series

This seminar series is a forum where people and organizations involved in ENR in Cambodia can exchange information and ideas. The theme of the series is "Valuing Nature". EEPSEA is responsible for inviting resource persons to talk on environmental economics topics with potential application for ENR management in Cambodia; CDRI takes care of local costs.

The EEPSEA Deputy Director delivered the inaugural lecture on "*Environmental Service Payments: Potential for Cambodia*" in October 2005. She was joined by the Secretary of State for the MoE, H.E. Kieu Muth, who presented a talk on the "*State of Environment in Cambodia*" and the Executive Director of CBNRM-LI, Kim Serey Rotha, who talked on "*Areas where Environmental Economics Research is Needed in Cambodia*".

There were five other talks in the series:

Dr. Dale Whittington from the University of North Carolina talked on "*The Contingent Valuation Method: Application in Developing Countries*".

Dr. Cory Naz, an EEPSEA researcher, discussed her work on "*Pricing of Solid Waste Management Services - An Application of Choice Modeling in the Philippines*." She was joined by the manager of the Municipal Solid Waste Program in Phnom Penh and by a solid waste expert from RUPP.

In February, Dr. Canesio Predo, another EEPSEA researcher, talked about "*Modeling Tools for Land Use Allocation in Agriculture and Forestry*".

The Project Leader of the DANIDA-funded Natural Resource Management Program of CDRI, Christian Sloth, presented the preliminary findings of their project: "*Land Use Allocation Decisions in Forestlands of Cambodia and Economics of Alternative Land Uses*".

Dr. Top Neth, who recently joined CDRI as head of the Natural Resource Management Unit, made a presentation on "*The Clean Development Mechanism (CDM) for Forestry: Potential in Cambodia*".

The number of participants per seminar has ranged from 16 to 37, with most coming from NGOs and government agencies. Discussions in all the seminars have been very active as people tried to assess how the topics could be applied in the Cambodian situation.

b) Training

The training programs offered in the three countries are discussed below in chronological order.

(i) Environmental Economics Teacher Training in Vietnam

From August 8-26, EEPSEA offered a course in Ho Chi Minh City, Vietnam to twenty-five Vietnamese teachers of undergraduate Environmental Economics. The participants came from fifteen universities and colleges all over Vietnam. A new mandate issued by the Ministry of Education in Vietnam makes Environmental Economics a required course in all economics and management degrees offered by universities and colleges in Vietnam. Unfortunately, not all the schools have the capacity to teach this subject. Many teachers have attended short courses on only a few topics in environmental economics while others have to rely on self-study of existing Vietnamese-translated EE textbooks. Others 'borrow' teachers from universities close by, which then find themselves over-stretched. EEPSEA, including senior EEPSEA researchers from Vietnam, decided to address this problem by designing a course expressly for these new teachers.

Preparation for the teachers' manual and curriculum course took place in May-June 2005 with the guidance of the EEPSEA Deputy Director and technical advice from Dr. Nancy Olewiler. The senior EEPSEA researchers who helped in the course preparation and teaching include: Dr. Bui Dung The (Hue University), Dr. Pham Thi Giac Tam (Nong Lam University), and Prof. Pham Khanh Nam (Environmental Economics Unit, University of Economics in HCMC). The EEPSEA Deputy Director wrote and taught some chapters of the course, along with EEPSEA researcher Asa Sajise, who taught the Natural Resource Economics section. The manual was developed in English during a one-week "writeshop" in Singapore. It was subsequently translated into Vietnamese, along with the relevant chapters of selected books chosen as reference materials for the course.

The course emphasized both the subject matter of environmental economics and teaching methods. For the latter, participants were exposed to the use of teaching techniques like case studies, role playing exercise, and discussion sessions. Each of the participants had the chance to give at least two "demo" teaching sessions, each one evaluated for substance and style by resource persons and co-participants. The course concluded with the participants' evaluation of the Teachers' Manual, which was subsequently revised and sent on CD file to the participants. The Manual, in CD form, is of course available to other teachers in Vietnam.

(ii) Environmental Economics: Overview & Research Methodology, for Laotian and Cambodian Researchers

This six-day course was the first module of a longer course, provided over a period of months. Twenty-eight participants attended. It took place in Sihanoukville, Cambodia in December. There were seventeen participants from Cambodia and eleven from Lao PDR. The resource persons consist of three senior EEPSEA researchers from Vietnam, Thailand and Malaysia, with the EEPSEA Deputy Director overseeing the course and teaching some topics.

The first four days were spent reviewing key economic concepts, EE principles and theories. They highlighted the analytical and valuation tools that could be used to analyze environmental problems through research. The last two days were spent explaining the principles of designing research proposals. They also discussed various aspects of the research process, like sampling design, data collection strategies and data analysis. The researchers also had the chance to discuss potential research topics.

(iii) Cost-Benefit Analysis

This course was offered to twenty-six participants from thirteen research and learning partner institutions (many graduates of the overview course). Priority was given to researchers whose proposals require the use of this tool. The course was held in Ho Chi Minh City February 20-25.

The course was designed to teach the basics of cost-benefit analysis in a simplified manner using Microsoft spreadsheet analysis. The resource persons were Dr. David James from Australia and Dr. Canesio Predo, a senior EEPSEA researcher from the Philippines. The spreadsheet manual was prepared by Dr. Predo with technical guidance from Dr. James a few months before the course was offered. This manual was subsequently revised and put on CD-ROM; it is now available to EEPSEA researchers and others who want to use CBA in their research.

The teachers used exercises frequently. They also guided the participants in developing spreadsheets for the Small Research Grants they were developing for EEPSEA funding (see below).

c) Small Research Grants

There are two small research grants programs for VLC operation: one for Vietnam and one for Lao PDR & Cambodia.

(i) Vietnam Small Research Grants (2006-07)

This program is designed for researchers who have little or no experience in designing or implementing EE research. The grant amount is smaller than that offered

in EEPSEA's region-wide competition while mentoring by resource persons is somewhat more directive. (A similar program was carried by EEPSEA with some success by EEPSEA in Vietnam in 1997-98, which led to the publication of Economy and Environment: Case Studies in Vietnam.)

Fifteen of the twenty-five participants in the Teachers' Training Course were invited to send in proposals for the Small Research Grants program. Participants were encouraged to do their research projects in teams of two or more people. Six proposals were received. The authors were then invited to a four-day workshop at which they presented proposals, received comments and worked on revisions with close guidance from resource persons. Further revisions were carried out after the workshop. At least two rounds of revisions were required for each project before acceptance in April 2006.

The approved projects are:

Pond "Tra" Fish Production in the Mekong Delta: Environmental Consequences and Pollution Control Options - Prof. Lang and Ms. Truc, Cantho University

Agro-product Processing in Handicraft Village Development Projects: Environmental Consequences and Pollution Control Options - Dr. Dung, Hanoi Agricultural University & Prof. Ha, Forestry University

Protected Area Establishment, Interventions and Local Livelihoods in the Phuhuong Nature Reserve - Mr. Lan, Vinh University

Household's Willingness to Pay for Preserving Lo Go-Xa Mat National Park - Prof. Dang Le Hoa and Ms. Ly of Nong Lam University

Profitability and External Cost of Coastal Wetland Shrimp Farming: The Case of Giao Thuy, Nam Dinh, Vietnam - Dr. Le Thu Hoa, Ms. Mai, and Ms. Hang of National Economic University

(ii) Lao PDR-Cambodia Small Research Grants (2006-07)

The series of training programs for Lao PDR and Cambodia described earlier were all geared towards the design of research projects identified as priorities by the various institutes.

There were six submissions from Laotian researchers, three of which have been approved. Two others are currently being revised.

Those approved are:

Improvement of Saysetha Park in Vientiane Capital City, Lao P.D.R: A Contingent Valuation Study (ERI-STEa)

Wastewater Treatment Options for Paper Mills near Houay Say Khao Stream, Vientiane (ERI-STEa)

Land Allocation Policy & Slash and Burn Practices: An Impact Evaluation (NAFRI)

From Cambodia, the following proposals were approved:

Cost-Benefit Analysis of the Community Forestry Project in Chumkiri District, Kompot, Province (CBNRM-LI)

Small-Scale Irrigation Systems in Cambodia: Problems and Net Benefit from Interventions (CDRI)

Land Use Conversion in a Protected Area: Understanding the Process and Causes (MoE)

A Cambodian project on solid waste management pricing is still under development.

d) Policy Brief Translations

To achieve wider outreach for research results, EEPSEA distributes a four-page Policy Brief that summarizes the main findings and recommendations of each EEPSEA Research Report. Local translation of these Policy Briefs has been underway for several years in Vietnam. A similar arrangement for local translation was made for Lao PDR and Cambodia. In Cambodia, CDRI takes care of local cost of translation, layout and distribution with EEPSEA paying for printing costs. In Lao PDR, the National University of Laos (NUOL) provides an in-kind contribution toward translation and printing of Policy Briefs in Laotian.

The Policy Briefs that have been translated in Cambodia are as follows, with four more due for translation in 2006:

Vegetables, Wetlands and Wastes: Food Safety in Phnom Penh

A Park for the People, not for the Powerful

A Kinder Cut: Making Malaysian Logging Less Destructive

Pricing Policies for Malaysia's Forest

Tracking the Trade: Vietnam's Illegal Wildlife Business

The National University of Laos has translated the following Policy Briefs, with three more due for translation in 2006:

Trade Liberalization and Pollution: Evidence from the Philippines

Forest Management System in the Mekong River Delta, Vietnam

Implementation and Financing of Solid Waste Management in the Philippines

e) Other

In addition to the above, the Deputy Director provided various kinds of support to local institutions:

- provided technical assistance to the Natural Resource Management Team of CDRI by helping review technical reports and proposals that requires environmental economics inputs;

- collaborated with the Department of Fisheries and ICLARM (World Fish Centre) in a training course on valuation for staff of the government fisheries department;

- interacted with other institutions in the ENR sector by participating in various workshops and conferences.

7. OTHER MEETINGS

The *Vietnam Environmental Economists Association* held its annual meeting in June 2006, this time focusing on market-based instruments for environmental protection. As in previous years, the meeting was co-financed by EEPSEA and local sources. The event was widely reported in local media.

Hermi Francisco participated in an expert consultation organized by FAO to establish a *forest policy network* for Asia and the Pacific, in Manila, March 2-3.

8. PUBLICATIONS PROGRAM

a) Research Reports

All Research Reports are now entered in the *Eldis Gateway to Development Information*, an online information archive and news service financed by Sida and other donors.

2005-RR5 *The Environmental Costs of Coastal Reclamation in Metro Cebu, Philippines*
– Lourdes O Montenegro, Annie G. Diola and Elizabeth M. Remedio

2005-RR6 *Dairy Cattle Development: Environmental Consequences and Pollution Control Options in Hanoi Province, North Vietnam* – Nguyen Quoc Chin

2005-RR7 *Transaction Costs in Water Markets in China's Heihe River Basin* – Junlian Zhang

2005-RR8 *Barriers to Water Markets in China's Heihe River Basin* – Junlian Zhang

2005-RR9 *Modeling Choices for Ecological Social Waste Management in Suburban Municipalities: User Fees in Tuba, Philippines* – Antonio Corinthia C Naz and Mario Tuscan N Naz

2005-RR11 *The Effectiveness of Electric Fencing in Mitigating Human-Elephant Conflict in Sri Lanka* - L H P Gunaratne and P K Premarathne

2005-RR12 *Economic Valuation of Cultural Heritage: A Case Study of Historic Temples in Thailand* – Udomsak Seenprachawong

2005-RR13 *Biotechnology Product Development Biosafety Regulations and Environmental Risk Assessment in the Philippines* – Linda M Penalba, John A Fajardo, Flordeliza A Sanchez and Aida O Grande

b) Policy Briefs

Searching for a Solution to Solid Waste in the Philippines – Zenaida M Sumalde

Will People Pay to Protect Watersheds? A Case Study from the Philippines – Margaret M Calderon, Leni D Camacho et al

Tapping into Demand: A New Approach to Waste Water Supply in Vietnam – Phan Khanh Nam and Tran Vo Hung Son

Reef Rescue: Financing Marine Conservation in the Philippines – Rodelio F Subade

New Land – At What Price? Land Reclamation in the Philippines – Lourdes O Montenegro et al

The Cattle Challenge: Controlling Backyard Pollution in North Vietnam – Nguyen Quoc Chinh

Water Worries: The Hidden Costs of Water Conservation in China – Junlian Zhang

Water Woes: Why Water Quota Systems in China are Not Working – Junlian Zhang

Farming vs. Forests: An Investigation from Sri Lanka – Prabodh Illukpitiya

Funding Solid Waste Disposal: A Study from the Philippines – Antonia Corinthia C Naz and Mario Tuscan N Naz

Elephants and Electric Fences: A Study from Sri Lanka – L H P Gunaratne and P K Premarathne

Saving Thailand's Temples: How Much Are People Willing To Pay? – Udomsak Seenprachawong

Making Biotechnology Safe: An Assessment From The Philippines – Linda Penalba et al

c) Translations

Approximately ten policy briefs are translated into Vietnamese and distributed widely in the country each year. These include all the policy briefs derived from EEPSEA Research Reports in Vietnam, as well as a selection of EEPSEA Research Reports from other countries.

Selected Policy Briefs are also available in Laotian and Khmer.

d) Website and Electronic Media

All EEPSEA publications are available free of charge at www.eepsea.org, along with the outline & reading list of the Environmental and Resource Economics core course, guidelines for proposals, news & 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.

e) Environmental Valuation Reference Inventory (EVRI)

Four new studies were input to Environment Canada's global valuation database.

9. IMPACT & OUTREACH

a) Policy Impact and Influence

i) Oil Spill Advice

In late 2005, a serious oil spill occurred off the Semirara Islands in Antique province, Philippines. EEPSEA researchers Rodel Subade, Joy Lizada and Gay Defiesta of the University of the Philippines, Visayas (UPV) had acquired experience in assessing

the value of environmental damages through their previous EEPSEA courses and research projects. Knowing this, UPV and local authorities requested these researchers to join a multi-disciplinary team that would assess the damages from the oil spill, to be used in the litigation process to determine appropriate compensation.

While this activity is still ongoing, the research team's initial findings have already attracted considerable attention in the local & national media. EEPSEA provided partial funding for this UPV-initiated research effort.

ii) Biogas Moves Ahead in the Philippines

Les Catelo's work to promote biogas to deal with backyard livestock waste continues to have impact. A Japanese aid agency is now constructing such facilities in the Laguna de Bay area.

ii) Solid Waste Management

Last year's annual report described *Cory Naz'* close working relationship with the municipal government of Tuba and their joint efforts to design a sustainable system for solid waste management. This year, The Canadian Institute of Public Administration invited the Mayor of Tuba and other local officials to observe the best practices of local governments in Manitoba including solid waste management systems.

b) Media Exposure

Indonesian researcher *Aziz* published an op-ed article advocating the use of green taxes in the October 17 Jakarta Post.

The Philippine News Agency featured *Rodel Subade's* research findings in a November 23 story "Filipinos willing to pay a price for Tubbataha Reef conservation".

Rodel was also interviewed several times in connection with his team's study of damages from the Semirara oil spill:

GMA-6 TV, January 30
Iloilo Cable TV, April 21
Philippine Daily Inquirer, April 22
GMA-7 TV (3 interviews: January-April).

David Glover was featured twice in connection with the *recurrence of haze* generated by forest fires in Indonesia. The first was a live panel discussion on Channel News Asia on August 19. The Indonesian Ambassador to Singapore and the Chair of Singapore's National Environmental Agency were the other panelists. The program was broadcast throughout Asia. The second was an interview in Singapore's Straits Times newspaper August 23.

c) Members' Accomplishments and Career Development

Several members applied skills they developed with EEPSEA in other fora, without EEPSEA funding. Among these were graduates of our 1995 & 1996 four-week courses in Vietnam:

Ms. Do Thi Huyen is now a Sida staff member in Hanoi.

Ms. Troung Thi Be Hai is Rector of the Public University in Vinh Long Province.

Mr. Nguyen Dinh Thien is Rector of the Economics University at Thai Nguyen.

Ms. Le Ha Thanh is with the Vietnam Development Forum, a joint research project of the National Economics University and the Graduate Institute for Policy Research in Japan.

Accomplishments of other EEPSEA members include the following:

Malik Ranasinghe is now Vice-Chancellor of the University of Moratuwa, Sri Lanka.

Reynaldo Cancio is now Economist in the Political, Economic, Trade & Public Affairs Section of the Delegation of the European Commission to the Philippines.

Canesio Predo of Leyte State University in Baybay, Leyte, Philippines served as resource person on a training course on "Introduction to Resource and Environmental Economics" August 4-6, 2005 at ELAC (Environmental Legal Assistance Center) office in Puerto Princesa City, Palawan. The course participants were fifteen ELAC employees from their Cebu and Palawan offices. ELAC is an NGO with several branches in the Philippines.

Canesio Predo and Salome Bulayog of the Leyte State University in Baybay, Leyte, Philippines served as resource and environmental economists in the project "Participatory Watershed Boundary Delineation, Resource Assessment and Watershed Management and Development Planning for the Salcedo Watershed Project". They worked in particular on participatory financial and economic analysis of land use options for Salcedo Watershed. The project was funded by PLAN International, an international NGO.

Rodel Subade of the University of the Philippines in the Visayas served as resource person during the June 5-7 strategic planning of the North West Panay Biodiversity Management Council, a multi-stakeholder council overseeing the conservation efforts for the endangered species and habitats in North West Panay, Philippines. He lectured on the need to determine and capture the economic values of the species and habitats, thereby

allocating adequate funds for conservation. His participation drew on information generated during his EEPSEA study of willingness to pay for conservation in Panay.

The Board of Regents of the University of the Philippines has approved a new Course on "Economic Analysis of Pollution Control Policies and Regulations" to be offered regularly by the Department of Economics at UP, Los Banos. The instructor will be *Zeny Sumalde*, who designed the course largely based on experience gained through her EEPSEA post-doctoral award in Canada and her EEPSEA research.

Luthfi Fatah has written a book, based to a large extent on material from EEPSEA's regional core course. The book, in Bahasa Indonesia, is called Ekonomi Sumberdaya Alam dan Lingkungan (The Economics of Natural Resource and the Environment). It is used as a textbook in the Department of Socio-economics, Faculty of Agriculture, Lambung Mangkurat University, Indonesia.

Vu Huy Nguyen teaches a Bachelor level course on Environmental and Natural Resource Economics in Ho Chi Minh City. Students must undertake small research projects as part of the course and most students use training documents and research papers from EEPSEA's website as source material.

d) Journal Articles & Chapters

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

Jie He, "Estimating the economic cost of China's new desulphur policy during her gradual accession to WTO: The case of SO₂ emissions", China Economic Review 16 (2005) p. 364-402.

Canesio Predo, "Understanding Tree-growing Decisions of Small Farmers in Claveria, Philippines", Philippine Journal of Crop Science, December, 2006, 31 (3): 3-20.

Canesio Predo and Herminia Francisco, "Improving Productivity, Profitability and Sustainability of Degraded Grasslands Through Tree-based Land Use Systems in the Philippines". In van der Ploeg, Jan and Masipiqueña, Andres (eds). 2005. The future of the Sierra Madre: Responding to Social and Ecological Changes. Proceedings of the Fifth International Conference on Environment and Development.

Zhong Funing, Ning Manxiu, Xing Li, "An Empirical Study of Factors Determining Crop Insurance Purchasing", Issues of Rural Economy, June.

Hao Subo, Zhang Junlian, Zhang Liqin, "Enforcement of Water Right System in Hongshuihe Irrigation Zone, Gansu Province, Northwest China: Results and Associated Factors", Journal of Agrotechnical Economics, No. 4, 2006.

e) Citations and Re-publication

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 research on costs and willingness to pay for conserving endangered species has proven useful in a UNEP/GEF-funded project to identify and pilot-test conservation financing mechanisms in the Philippines.

Les Catelo has published a Policy Brief drawing on her EEPSEA work through the International Food Policy Research Institute (IFPRI) ("Livestock and Health": Vision 2020 Focus 13, PB 9).

Vu Xuan Quang's EEPSEA-supported thesis has been nominated as among the three best dissertations of the Vienna University of Economics & Business Administration in 2005. The university will publish the thesis in book form (through the European Publishing Co. for Sciences).

Suthawan Sathirathai's work was cited in E. Barbier and M. Cox, "An Economic Analysis of Shrimp Farm Expansion and Mangrove Conversion in Thailand", Land Economics, August 2004, 80 (3) 389-407.

f) Conference Presentations

Several researchers presented work supported by EEPSEA at regional and international conferences, most with sponsorship from other agencies.

i) EEPSEA at the World Congress

Several researchers presented papers based on their EEPSEA projects at the prestigious *World Congress of Environmental and Resource Economists* in Kyoto, Japan in July:

Tran Huu Tuan, "Willingness to Pay (WTP) for Conservation of Temples, Vietnam"

Anabeth Indab, Jin Jianjun, Dielre Harder, Orapan Nabangchang, Truong Dang Thuy, Rodel Subade, "WTP for Marine Turtle Conservation: A Cross-Country Comparison in Asia"

Jin Jianjun & Dielre Harder, "Hypothetical and Real WTP for Marine Turtle Conservation: A Cross-Cultural Experiment"

Rex Labao, Hermi Francisco, Deildre Harder & Florence Santos, "Scope, Photographs and WTP for National Bird Conservation"

Marge Calderon, "WTP for Improved Watershed Management, Philippines"

Lourdes Montenegro, "The Environmental Costs of Coastal Reclamation in Cebu, Philippines".

ii) Other conferences

Erwin Corong participated in three conferences:

"Third Workshop on Integrated Climate Models: An Interdisciplinary Assessment of Climate Impacts and Policies", Trieste, Italy, January 12-13.

Seminar on "Completing the Doha Round: Bridging the Agricultural Divide", Salzburg, April 30 - May 5.

European Summer School in Resource and Environmental Economics. "Computable General Equilibrium Modeling in Environmental and Resource Economics", Venice, June 25 - July 1.

Funing Zhong presented two conference papers:

"The Relationship Between Crop Insurance and Agro-chemical Uses", at the China/OECD Conference on Chinese Environment, Resource and Agricultural Policy in Beijing, June 19-21.

"A Study of the Relationship Between Crop Insurance and Farmers' Agrochemical Uses: An Empirical Analysis of Manas Watershed, Xinjiang, China" (with Ning Manxiu, Xing Li, and Miao Qi), at the 2005 Annual Conference of Chinese Economists Association, Xiamen, December 9-11.

Prabodh Illukpitiya presented a paper on "Economics of biodiversity conservation: technical efficiency in agriculture and its effect on forest resource extraction by rural households of Sri Lanka" at the Third Biennial Conference of the US Society for Ecological Economics (USSEE), Tacoma, Washington, July 20-23.

10. MANAGEMENT

EEPSEA's current Director, *David Glover*, will step down next year to assume other responsibilities for IDRC, EEPSEA's host agency. As Program Leader, Global Environmental Economics, he will act as IDRC's contact person with the various environmental economics networks in the developing world. David will continue to be posted at the IDRC office in Singapore until 2008.

EEPSEA's new Director, effective January 2007, will be Dr. Hermi Francisco.

Hermi has been Deputy Director since 1995, most recently in Phnom Penh, Cambodia. Her long experience as a university teacher, researcher and policy advisor will be great assets to EEPSEA. Hermi will be based in the IDRC office in Singapore.

Catherine Ndiaye continues in Singapore as Program Assistant, with part-time assistance from *Ang Cheng Hiang*.

Effective July, EEPSEA and IDRC moved to new premises:

EEPSEA, c/o IDRC
22 Cross Street #02-55
South Bridge Court
Singapore 048421

E-mail addresses are unchanged.

Annex

SPONSORS GROUP

The Sponsors Group of participating donors sets policy, provides financial support and approves the annual Program of Work & 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.)

Sida extended its current grant and increased the annual rate of funding, effective January 2006 from CAD 450,000 to CAD 510,000 per year.

International Development Research Centre (IDRC), Canada \$800,000/year

Swedish International Development Agency (Sida) \$455,000/year

Canadian International Development Agency (CIDA) \$400,000/year

ADVISORY COMMITTEE

The Advisory Committee advises the Director on priorities for research and training and recommends to the Sponsors Group the annual Program of Work. The Committee consists of senior scholars and policy makers active in environmental management in Asia. A majority of the Committee's members are 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 membership in 05-06 is listed below.

Dr. Suthawan Sathirathai, Good Governance for Social Development and the Environment Institute, Thailand

Dr. Jikun Huang, Chinese Centre for Agricultural Policy

Dr. Le Quy An, Vietnam Society for Nature Conservancy and former Vice-Minister of Science, Technology and Environment, Vietnam (deceased September 2005)

Mr. Agus Purnomo, Pelangi Indonesia

Dr. Myrick Freeman III, Bowdoin College, USA

The terms of all members expired in 2006. New members will be appointed in time for the November 2006 committee meeting.