



ANNUAL REPORT April 2014 to March 2015



Economy and Environment Program for Southeast Asia

About EEPSEA

The Economy and Environment Program for Southeast Asia (EEPSEA) 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 issues so that researchers can provide sound advice to policymakers.

To do this, EEPSEA builds environmental economics (EE) research capacity, encourages regional collaboration, and promotes EE relevance in its member countries (i.e., Cambodia, China, Indonesia, Lao PDR, Malaysia, Myanmar, Papua New Guinea, the Philippines, Thailand, and Vietnam). It provides: a) research grants; b) increased access to useful knowledge and information through regionally-known resource persons and up-to-date literature; c) opportunities to attend relevant learning and knowledge events; and d) opportunities for publication.

EEPSEA was founded by the International Development Research Centre (IDRC) with co-funding from the Swedish International Development Cooperation Agency (Sida) and the Canadian International Development Agency (CIDA). In November 2012, EEPSEA moved to WorldFish, a member of the Consultative Group on International Agricultural Research (CGIAR) Consortium. The Program now has two offices – one in the WorldFish headquarters in Penang, Malaysia and another in the WorldFish Philippine Country Office in Los Baños, Philippines.

EEPSEA's structure consists of a Sponsors Group comprising its donors (now consisting of IDRC and Sida) and host organization (now WorldFish), an Advisory Committee, and its secretariat.

EEPSEA publications are available online at <http://www.eepsea.org>.

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Donors:

International Development Research Centre
Swedish International Development Cooperation Agency

Implementing Agency:

WorldFish

March, 2015

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What we have done: A snapshot

The Program's goal is to strengthen local capacity in the economic analysis of environmental issues so that researchers can provide sound advice to policymakers. Ultimately, the Program aims to facilitate the improved design and implementation of policies and programs towards sustainable environmental and natural resource management. To do this, EEPSEA:

- **Builds environmental economics research capacity** in the region through its various training courses as well as by providing research awards.

This fiscal year, EEPSEA awarded **28 research grants** and conducted **four regional and three in-country training courses** geared towards the capacity building of local researchers (see Section 1).

- **Promotes the relevance of environmental economics in decision making** by offering training courses on various tools to natural resource managers and policymakers as well as other non-traditional research users (e.g., justices). It also supports the conduct of in-country policy dialogues to serve as venue for EEPSEA researchers to share their research results and interact with natural resource managers and policymakers.

This fiscal year, EEPSEA conducted **two regional training courses** that included, or were tailored for, research users (i.e., natural resource managers, policymakers, justices). It also supported the conduct of **four in-country policy dialogues**, which aimed to provide a venue for the discussion critical environmental issues with local policymakers.

Two regional events were also supported by the Program to serve as a venue to share success stories on and further discuss concerns regarding environmental trends of regional relevance (see Section 2).

- **Increases the visibility of EEPSEA researchers and their outputs** by supporting the participation of EEPSEA researchers in regional and international knowledge events as well as by taking advantage of various channels in sharing EEPSEA research results.

This fiscal year, EEPSEA supported the participation of **34 researchers to seven conferences**. The Program also



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published **13 research reports, 8 policy briefs, and 4 books**. Moreover, it achieved **15 media citations, 12,137 unique website visits**, and an average of **232 RePEC downloads per month**. In addition, **673 papers cited EEPSEA publications** in 2014.

The EEPSEA website was also given a new look this year so that it may better reflect the Program's goals and outputs (see Section 3).

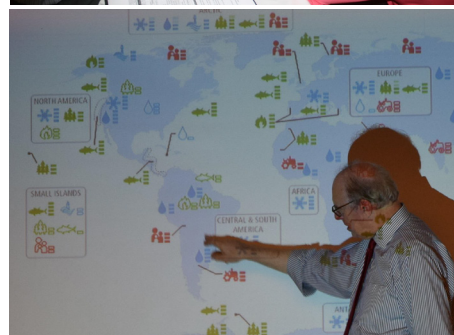
- **Safeguards the sustainability of capacity building in environmental economics research** in the region by strengthening links with national and regional organizations and contributing towards the development of a community of environmental economists in Southeast Asia.

This fiscal year, EEPSEA conducted **four regional events with four regional organizations**. The Program also supported **seven national events and one regional event with six national organizations**. It also held a **regional course that aims to support plans to establish Environmental Economics Institutes** in various EEPSEA member countries in preparation for EEPSEA's closing this 2016 (see Section 5).

On top of these, other outcomes worth noting, which resulted from the Program's influence and which stemmed from the individual efforts of EEPSEA's research grantees and trainees as they reported during our November 2014 Impact Tracer Survey¹, are as follows:

- Seven (7) EEPSEA research studies were presented in 14 conferences and policy forums;
- At least six (6) graduate courses, 5 undergraduate courses, and 2 degree programs were developed in 10 different universities in the region; and
- Thirteen (13) journal articles were published based on EEPSEA-funded studies.

Details of these accomplishments are discussed in the succeeding sections.



¹ Research impacts take time to manifest and so we are reporting here outcomes that we have gleaned from the 26 research grantees and 180 training participants who responded to our November 2014 Impact Tracer Survey. Of the 180 trainees who answered the survey, 58 (32%) attended courses during the reporting period. Of the 26 research grantees who answered the survey, 7 (27%) received their research grant in 2014. Many of those who responded to the researchers' survey also attended one or more of the Program's training courses for researchers.

SECTION 1

Building environmental economics research capacity in Southeast Asia

EEPSEA builds environmental economics (EE) research capacity in the region by offering training courses, awarding research grants, and providing research mentoring support. By doing so, the Program not only hopes to increase the analytical capacity of local researchers from national and regional institutions, particularly in dealing with environmental issues, it also contributes towards increasing the number of researchers doing EE research in the region. Increasing the conduct of EE research in the region, in turn, increases the probability that such economic analyses are considered in environmental and natural resource management and policymaking.

1. Increased understanding of environmental economics concepts & methods through training course offerings

Offering courses that build on local researchers' existing knowledge and skills in the conduct of EE research is one of EEPSEA's strategies in increasing the number of EE researchers in the region. This fiscal year, EEPSEA held seven such courses; four are regional training courses and three are in-country courses (see Appendix A for full list EEPSEA regional and in-country courses).

Regional training courses for researchers

EEPSEA's regional training courses for researchers focus on economic tools and techniques that can be used to develop an environmental research agenda. This fiscal year, the focus of our regional training courses tailored for researchers are valuing ecosystem services, modeling climate change damages, fishery economics, and experimental economics.

A two-day course facilitated by Dr. Nancy Olewiler of Simon Fraser University discussed economic tools and techniques that can be used in fishery resources management. Among the 19 researchers who attended this ***Economics of Fishery Resources and Management*** course are those who work in Tonle Sap, Cambodia; Mekong River, Vietnam; Salween River, Myanmar; Laguna Lake, Philippines; and Songkhla Lake, Thailand. The discussion started with the participants sharing the prevailing issues in each of the five lakes/ivers and was followed by activities and discussions on the economic tools to use in analyzing fishery resource issues.

A four-day course facilitated by Dr. Miriam Hadness, of the Vietnamese German University in Ho Chi Minh City, and EEPSEA Deputy Director Dr. Pham Khanh Nam trained researchers in conducting field experiments related to cooperation and risk/uncertainty, linking them to resource management and climate change adaptation in the real world. The course, entitled ***Experimental Method for Environmental and Resource Economics***, combined classroom lectures with in-class field experiments for participants to learn some basic knowledge on field experiments and protocols in conducting certain types of experiments.



Dr. Olewiler during the course on the ***Economics of Fishery Resources and Management*** in Phuket, Thailand.

I am involved in a Fish Stock Assessment project...the [Economics of Fishery Resources and Management] training helped me understand that there is also a need to determine the impact of fishing to the ecosystem in terms of economics.

*~ Gigi Albor,
Philippine Bureau of Fisheries
and Aquatic Resources*

The four-day course facilitated by Dr. Michael Hanemann of Arizona State University's School of Sustainability together with Prof. Wolfram Schlenker of Columbia University focused particularly on the damages from climate change -- what those damages might be, how they are evaluated, what are the problems with those estimates, and their implications for decisions on greenhouse gas reduction. Entitled ***Modeling Damages from Climate Change***, it provided a conceptual and methodological overview of recent developments in the economics of climate change, exposing participants to outstanding empirical challenges and open questions in the literature.

With Myanmar's current efforts to advance their economic development in parallel with environmental conservation, now is the best time to come in and strengthen the country's capacity in the economic analysis of environmental issues. Hence, EEPSEA, in collaboration with Myanmar's Co-operative University, organized the **Short Course on Environmental Economics in Myanmar**, which was attended by 31 researchers and lecturers from seven Myanmar universities. EEPSEA Deputy Director Dr. Orapan Nabangchang and EEPSEA Senior Economist Dr. Asa Jose Sajise facilitated the course.

In each of these in-country courses, the last day was devoted to the presentation and critique of research proposals developed by the participants during the course. This exercise provides participants with valuable feedback on how they can further improve their proposals for possible funding by the Program for those interested in applying for EEPSEA's research grants.

Contribution to professional development

EEPSEA researcher-trainees have reported throughout the years that participating in EEPSEA courses has contributed to their professional development in various ways. This fiscal year, the 86% who affirmed this through our annual Impact Tracer Survey reported that the EEPSEA courses they attended:

- Improved their EE research skills and expanded their understanding of EE methods (49%);
- Improved their capacity to teach EE and provided them with new teaching materials (21%);
- Widened their professional network (13%);
- Was a key factor in their getting their scholarship or in getting promoted to a higher position (9%);
- Provided the impetus and/or the improved capacity to develop an EE research proposal and seek grants (7%);
- Helped with their MS thesis/PhD dissertation (6%);
- Led to research collaborations and/or enabled them to join research projects (4%); and
- Improved their policy planning capacity (2%).

Moreover, 58% of the researcher-trainees report that their working relationship with those from non-economic disciplines improved because of the EEPSEA training/s they attended.

Development of new academic courses

Thirty-seven percent (37%) of the 139 academe-based EEPSEA trainees who answered the Impact Tracer Survey shared that they incorporated or used the lessons and materials from the EEPSEA training courses they attended in the economics courses they handle in their respective universities. Of these, 10 reported having developed new courses related to EE after their EEPSEA training (see Appendix B for list of courses developed).



Participants of the in-country training courses for researchers in (from the top) the Philippines, Cambodia, and Myanmar.

The EEPSEA training I attended enabled me to begin doing research in environmental economics in Thailand...During the past years, I have served in several national committees related to environmental management, such as the National Environment Board. What I learned from EEPSEA since 1996-97 is still an important part of the knowledge that I have used to help reshape environmental policy measures in Thailand.

*~ Adis Israngkura,
Thailand Development
Research Institute*

Forty-five percent (45%) of the academe-based EEPSEA trainees reported that attending the EEPSEA training helped them improve an economics-related degree program in their university. Of these, two reported that they are currently developing a degree related to EE in their respective units (see Appendix B for list of degree programs developed).

It is also worth noting that 64% of the academe-based EEPSEA trainees are currently teaching EE-related courses. On the other hand, outside of the classroom, 21% of the 180 EEPSEA trainees who answered the survey used EEPSEA materials during stints as a resource person in training sessions.

2. Increased number of environmental economics researchers in the region

Awarding research grants is another EEPSEA strategy in increasing the number of EE researchers in the region. Such awards provide researchers with the needed experience to further hone their EE research skills. The Program offers three types of research grants:

a) **competitive research grants** (CRG), which are chosen from those who responded to EEPSEA's Call for Proposals, are evaluated in time for EEPSEA Annual Conference, and include dissertation research grants secured by Southeast Asian graduate students in developed countries like the USA, Canada and Australia;

b) **cross-country research grants** (XRG), which are funded through a closed call for proposals on key research areas and whose researchers meet to set common objectives, develop a common framework and agree on common research instruments to be used; and

c) **small research grants** (SRG), which are offered to research projects that have a shorter duration or to researchers from provincial colleges and universities from countries where capacity for EE research is still at a relatively low level.

This fiscal year, EEPSEA approved a total of 28 research grants (see Appendix C for full list). Majority (64%) are in the CRG category (Table 1), of which five are dissertation grants, with the rest being SRGs. The top three countries receiving the most grants are Vietnam (9 grants), China (5 grants), and Myanmar (5 grants) (Figure 1). Grants given to Myanmar researchers were all SRGs while all those awarded to Chinese researchers were CRGs. Most of the grants were awarded to female researchers (71%).

Since no cross-country research idea/topic was deemed relevant and/or of interest to researchers, subject to approval of donors, the budget for XRGs will be allocated for the next fiscal year.

Table 1. Approved research grants

Type	Freq	%
Competitive Research Grants	18	64
Cross-Country Research Grants	0	0
Small Research Grants	10	36
Total	28	100

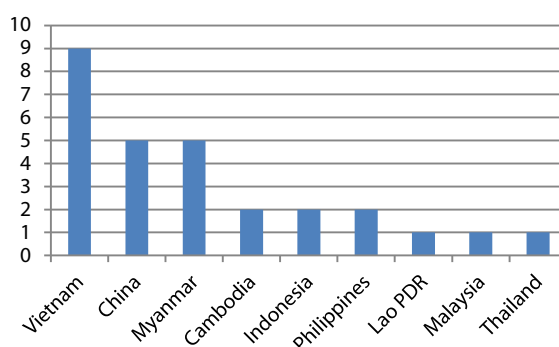


Figure 1. Distribution of research grants awarded by country

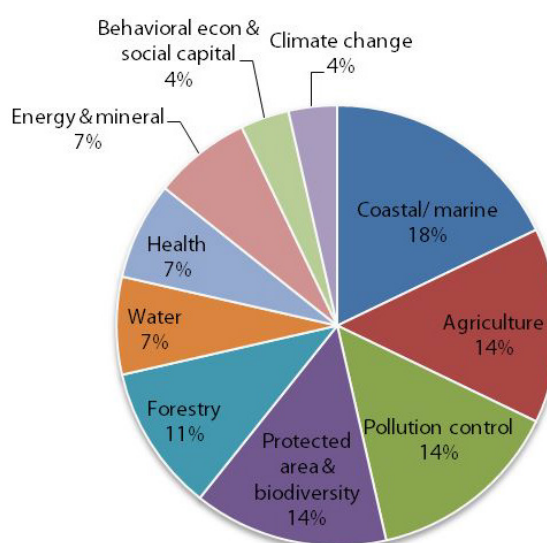


Figure 2. Distribution of research grants awarded by research area

While the topics of the cross-country research projects are partly determined based on the research priority setting of EEPSEA, the choice of topics for the CRG and the SRG are largely dependent on national priority research concerns. Based on the distribution of the CRGs and the SRGs by research area (Figure 2), research on *coastal/marine* issues dominated, closely followed by *agriculture, pollution control*, and *protected area & biodiversity* issues.

Contribution to professional development

Researchers who have received EEPSEA research grants have reported throughout the years that these awards have helped further their professional development in various ways. This fiscal year, the 88% who affirmed this through our annual Impact Tracer Survey reported that receiving an EEPSEA research grant/s:

- Improved their research and teaching skills (48%);
- Allowed them to publish their study, which improved their credentials (30%);
- Facilitated the completion of their PhD dissertation (17%);
- Widened their professional network (13%); and
- Was a key factor in getting their scholarship, a new job, or achieving a higher position (9%).

Moreover, 96% of the EEPSEA research grantees indicated that their EEPSEA project improved their networking at the local, national, regional and international levels. It is also worth noting that 13 journal articles (listed below) were published by 10 EEPSEA research grantees this fiscal year based on the results of their EEPSEA-funded studies.

The EEPSEA research grants I received enriched our research capacity, which helped advance my career. I was promoted as head of the Department of Environmental Economics in 2012. ~ Nguyen Mau Dung, Hanoi Agricultural University

Through the experiences I received from EEPSEA, I can now better engage with other agencies and institutions in dialogues, lecturing, and consulting. ~ Chou Phanith, Royal University of Phnom Penh

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3. Research mentoring support

An important part of EEPSEA's capacity building recipe is the mentoring support provided to EEPSEA research grantees. Each EEPSEA research grantee is assigned an adviser from EEPSEA's pool of regional and international experts who will then guide the researcher during the grant period. This support is seen as invaluable, especially by researchers with little environmental economic research experience. The research grantee and his/her EEPSEA adviser meet face-to-face during the EEPSEA annual conferences.

EEPSEA's annual conference is the focal point of the Program. It brings together researchers, resource persons, eminent speakers, and the Sponsors Group and the Advisory Committee. The four-day event includes individual consultations between researchers and their advisors; concurrent working group sessions during which research reports and proposals are presented for further comment; and plenary sessions with talks by international experts. The conference is held yearly in May.

2014 Annual Conference in Phuket

EEPSEA's 2014 Annual Conference was held in Phuket, Thailand on 12-14 May 2014. It was attended by 72 participants from 13 countries. Of these, 41 were researcher-presenters, 12 of which presented on their ongoing EEPSEA research projects, 6 on their final EEPSEA research reports, and 23 on their submitted research proposals for possible funding by the Program. The researcher-presenters represented eight of EEPSEA's member countries: Vietnam (11), China (9), Indonesia (7), Philippines (5), Thailand (3), Cambodia (3), Myanmar (2), and Malaysia (1). A little more than one-third of the presentations focused on climate change-related themes followed by coastal and marine (29%) and agriculture/food security (17%) issues (Table 2).

The conference's three plenary talks are summarized in the succeeding sections.

Table 2. General theme of workshop presentations by country

Conference	Phils	Cam	Viet	Chi	Thai	Indo	Mal	Mya	TOTAL
Agriculture		1	1	2		2		1	7 (17)
Behavioral econ & social capital				3		1			4 (9)
Climate change	2	3	5	3		1			14 (34)
Coastal & marine	3	2	4		1	2			12 (29)
Energy & mineral				1	1				2 (4)
Forestry				1		1			2 (4)
Pollution control	1		1	1	1			1	5 (12)
Protected area & biodiversity			2				1		3 (7)
Water resources			1						1 (2)
TOTAL	6 (15)	6 (15)	14 (34)	11 (27)	3 (7)	7 (17)	1 (2)	2 (5)	50

NOTE: Multiple response table. Percentages (figures in parenthesis) based on total number of researcher-presenters (n=41).

PLENARY TALK 1: *Ancient Instincts: Hurdles along 21st Century Water Development Paths*

Dr. Dale Whittington of the University of North Carolina at Chapel Hill discussed the historical evolution of municipal water development. He pointed out that the role of water for various purposes, such as relaxation, recreation, and cleansing, is very ancient. Through time, the focus on water and sanitation needs dominates and with the Industrial Revolution, the focus on water infrastructures received central focus.

Based on human experience and history with water, Dr. Whittington then enumerated four ancient instincts that humans have developed through time: 1) our instinct of fear and danger, which translates to our opposition to water privatization; 2) our instinct to regard water as a source of relaxation; 3) our instinct



to regard water as a non-tradable resource and to expect fairness in its access; and 4) our instinct to regard human waste with disgust and our need to innovate ways by which we can dispose of it. He ended his presentation by enumerating the current water and sanitation problems now faced and the inadequate policies and programs in place to combat each, which in turn points to the need for future research into these concerns.

***PLENARY TALK 2: Aquaculture, Fisheries and Globalization:
What the Next Generation of Environmental and Resource Economists Need to Know***

According to Dr. James L. Anderson, Advisor for Fisheries, Aquaculture and Oceans of the World Bank Group, roughly two thirds of the world's population lives within 100 km of the coastline, which points out that much of humanity depends on the goods and services (which includes food and nutrition, and livelihood) that a healthy ocean provides, particularly as the climate changes. However, as a result of globalization, aquaculture and fisheries resources face overfishing, habitat degradation and loss, and pollution. He then discussed efforts to address these challenges such as those done under the Global Partnership for Oceans (GPO) and the the World Bank's Aquaculture Action Plan.



Among the key approaches are: raising aquaculture productivity; directly linking producers with markets to reduce waste in the value chain; developing market systems to increase transparency and efficiency; reducing risk and harvest volatility in fishing; and enhancing environmental services and health by improving the governance of capture fisheries and aquaculture and ensuring the sustainability of fish stocks. Dr. Anderson ended his talk by emphasizing that there is a great and urgent opportunity for researchers to contribute to various efforts to improve fisheries management. He points out that to have a better chance to make a difference, a holistic perspective, public-private partnership, new data, science, innovation, understanding of enviro-economic systems, and new human capacity are required.

PLENARY TALK 3: InVEST: A Tool for Mapping and Valuing Environmental Services

World Wildlife Fund (WWF) - Greater Mekong's Dr. Peter Cutter emphasized the importance of increasing efficiency in natural resources use to improve the well-being and competitiveness of countries in the Greater Mekong Sub-region (GMS). He presented the contribution that the Natural Capital Project, a joint effort between Stanford University, WWF, Nature Conservancy, and the University of Minnesota, offers on this matter. The Project developed a software that integrates the values of nature into all major decisions affecting the environment and human well-being; this is called the Integrated Valuation of Environmental Services and Trade-offs (InVEST) software.

InVEST enables decision makers to assess quantified tradeoffs associated with alternative management choices. It allows the use of scenarios based on inputs from valuation studies and the use of spatial attributes and biophysical models. Dr. Cutter highlighted some resources requirements in using InVEST, such as information and data requirements, time, and expertise on GIS, and on specific fields such as hydrology and economics. To illustrate how InVEST can be used, he also presented some InVEST Models such as Carbon Storage Model, Water Yield and Hydropower Production Models, and Avoided Sediment Model. Focus was mainly on the practical applications of InVEST particularly for scenario designs.

SECTION 2

Promoting the relevance of environmental economics in decision making

To facilitate the uptake of EEPSEA research results at the national and regional levels, EEPSEA holds learning and knowledge events that either include natural resource managers, policymakers and other research users or are specifically tailored for them. Such events aim to cultivate in them an appreciation of the relevance and usefulness of EE research results in natural resource management decision making and policymaking.

1. Increased number of research users receiving training on environmental economics

This fiscal year, EEPSEA held two learning events with research users as participants. Such events aim to provide them with a working knowledge of EE tools and techniques so that they may appreciate how useful these are in decision making (see Appendix A for full list EEPSEA regional and in-country courses).

Park managers as training participants

The first is a five-day course held in collaboration with ECO-BEST (Enhancing the Economics of Biodiversity and Ecosystem Services in Southeast Asia) and the ASEAN Centre for Biodiversity (ACB). Entitled ***International Training Course on Biodiversity Valuation and Payment for Ecosystem Services***, it discussed the tools to use in measuring the value of biodiversity and the cost of biodiversity conservation, specifically for the establishment, management and monitoring of payment for ecosystem services (PES) schemes.

Of the course's 33 participants, 12 were park managers or representatives of ASEAN Heritage Parks (AHPs). Another 12 participants were invited representatives from the Ministry of Environment (MOE) of the countries with AHP representatives in the course. The rest of the participants were university-based researchers who are interested in conducting research in collaboration with the AHP sites represented in the course. This participant composition was meant to facilitate interaction and encourage collaboration between the AHP natural resource managers, their country MOE, and local researchers.

Aside from the various technical experts who served as resource persons in the course, the discussion was further enriched by inputs and insights from those with experience in PES establishment and management. Ms. Huynh Thi Mai, of Vietnam Environment Administration's Biodiversity Conservation Agency, shared insights from the PES project in Ca Mau, Vietnam. Mr. Indra P. Sunjoto, of



Group activity during the course on biodiversity valuation and PES in Khao Yai Park, Thailand.

***I have gained
a new perspective on the
management of ecotourism
in a conservation area.***

*~ Fredy Parabang,
Lorentz National Park*

Sabah Forestry Department, shared their experiences from the Malua Wildlife Habitat Conservation Bank in Malaysia.

Training course for justices

The course on ***Economic Values, Compensation and the Environment*** is the second training held by EEPSEA this fiscal year for research users. The course brought together justices from Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, and the Philippines to discuss the economic approaches used to measure the value of environmental goods and services as well as the use of such values in environmental adjudication cases.

Economist Dr. Benoit Laplante and Justice Brian Preston of Australia's Land and Environment Court of New South Wales served as the course resource persons. This course is the latest of a series of trainings conducted by EEPSEA for green bench justices, the first being the 2008 training course that EEPSEA jointly organized with the Asian Environmental Compliance and Enforcement Network (AECEN). This was followed by the 2012 in-country training course for the Thai justices.

This particular course was structured around cases of environmental conflicts (e.g., deforestation, oil spill, mining, and pollution and natural resource damages) that have direct and indirect health impacts. The theories and the tools for analyzing the economic value of the damages were discussed.

Participants commented that while they have dealt with environmental conflicts prior to the training, these have been viewed primarily as either tort cases or criminal cases, so the training course "was like an eye-opener" for them, giving a systematic approach on how they can determine the value of damages and the required compensation.

The course led to several requests for further training. Vice President of the Royal Academy for Judicial Profession Mr. Chenda Thong requests that EEPSEA organize an in-country activity in Cambodia for final year law students who will graduate to become either environmental justices or public prosecutors. There is also a request from the Thai justices for joint funding with EEPSEA to organize a second in-country training to facilitate continued dialogue on the economic valuation of environmental impacts and the setting of compensation in cases of environmental litigation. The target group will be more junior justices from Preliminary Courts and Civil Courts.

3. Greater interaction between researchers and policymakers

Aside from learning events, EEPSEA also supports the conduct of knowledge events such as policy dialogues and conferences that aim to serve as a venue for: a) the sharing of EEPSEA research results to local policymakers; and b) the deeper discussion of a current environmental concern, which the Program can further develop as part of its research agenda or which can be used as a takeoff point to further promote the relevance of environmental economics research in decision making. This fiscal year, EEPSEA supported the conduct of six such events (see Appendix A for full list EEPSEA events).



Participants of the EEPSEA course on *Economic Values, Compensation and the Environment* for justices.

I found the [Economic Values, Compensation and the Environment] course very, very useful in my work. As a professor at the Philippine Judicial Academy, I also plan to impart what I learned from the course in the appropriate forum.

~ Hon. Divine Aquino-Simbulan

EEPSEA studies point to need for sustainable lake management

Prince of Songkla University's Department of Economics, with support from EEPSEA, conducted a policy dialogue on sustainable lake management focusing on the results of two EEPSEA-funded research projects on the sustainable management of Songkhla Lake, namely: *Pollution Control and Sustainable Fisheries Management in Southern Songkhla Lake, Thailand* and *Response of Fishermen to Fishing Control Policies in Southern Songkhla Lake, Thailand: A Field Experiment*. Taking off from the results of these EEPSEA-funded researches, the meeting served as a venue to further discuss appropriate solutions to the issues of pollution and fishing control in Southern Songkhla Lake.

The dialogue was attended by 37 representatives of policymaking government agencies, community leaders representing the interests of fishermen, and university researchers. After the dialogue, participants better appreciated the use of economic tools for environment and natural resource management, especially those who initially shared their uncertainty on how economics can input into lake management policymaking.

EEPSEA consults policymakers on research agenda on groundwater contamination

EEPSEA supported a policy dialogue on the issue of arsenic water contamination and its impact on drinking water options in Vietnam and Cambodia. The event was organized by Cantho University's School of Economics and Business and was attended by 34 stakeholders representing various local universities and government units concerned with water and sanitation.

The discussion focused on the arsenic contamination of groundwater in the lower Mekong basin areas between the Vietnamese and Cambodian floodplains vis-à-vis safe water use options in the surrounding rural areas. It was determined during the discussion that the following need to be determined at present, among others: a) the economic impacts or "costs" of the arsenic contamination; and b) the suitable mitigation measures that should be prioritized for policy action, based on the costs and benefits of each mitigation measure.

CBA of sustainable beach conservation takes center stage

Prince of Songkla University's Department of Economics, with support from EEPSEA, conducted a seminar that focused on discussing the beach erosion problem along the southern region of the Gulf of Thailand and on identifying potential alternative policies and measures as solution. The issue has become critical and has received much interest from many sectors because of the constant failure of existing preventive measures to rehabilitate the beaches.



From the top: The policy dialogue on sustainable lake management at Prince of Songkla University in Thailand (top photo) with EEPSEA Deputy Director Orapan Nabangchang presenting about EEPSEA (second photo); the policy dialogue on arsenic water contamination at Cantho University in Vietnam (middle); and the seminar on sandy beach management held at Prince of Songkla University, Thailand and its field trip (bottom two photos).

The relevance of environmental economics research was emphasized, especially during the presentation of the economic value of sandy beaches as well as in presenting the result of the economic cost-benefit analysis comparing the two main approaches sandy beach erosion management being discussed – either through an engineering construction or through beach nourishment and the removal of the constructions that cause erosion. More than 60 stakeholders attended the event particularly representatives from relevant government agencies, academia, communities, and the mass media.

EEPSEA supports dialogue on Vietnam's green growth

EEPSEA supported a policy dialogue focusing on national level concerns on the achievement of green growth in Vietnam. The event was implemented with the University of Economics at Ho Chi Minh City (UEH).

Among the topics discussed were the macroeconomic policies developed to meet the requirements of green growth in the context of global climate change; the implementation of the green growth strategy in south Vietnam; and the difference in green growth policies in rural and urban areas, particularly in the Mekong Delta provinces and in Ho Chi Minh City. Current business trends towards supporting green growth were also discussed as well as the responsibilities of economic management agencies, media agencies, professional associations and consumers in achieving green growth.

More than 40 people attended the policy dialogue including representative researchers and policymakers from the provinces of South and South Central Vietnam. Additional focus was given on Vietnam's Decision No. 1393/QĐ-TTg, which contains the country's development strategy (2011 to 2020) and vision for 2050.

EEPSEA beefs up talks on region's green growth efforts

EEPSEA also supported a regional policy dialogue on green economy. Entitled *Transition to Green Economy in Southeast Asia*, the policy dialogue served as a venue for researchers and policymakers to share views on green growth in the context of globalization; evaluate the current situation and future shifts towards green economy models; and assess current policies on green growth and green economy. The ultimate aim is to contribute towards creating a shared understanding of the green economy approach.

The conference program was comprehensive moving from the policy dimension to urban sector, agriculture, energy, manufacturing and green consumption. Of particular interest was the presentation on *"Sustainable Management of Putrajaya Lake and Wetland"* presented by Mr. Akashah Majizat from Environmental, Lake and Wetland Division, City Planning Department, Putrajaya, Malaysia. It generated a number of issues of replicability and funding mechanisms as well as the potential contribution of economic valuation in sensitizing policymakers on the importance of wetlands.

The three EEPSEA-supported studies presented also generated widespread discussion on technical research design issues as well as policy relevance. These included Le Thanh Loan's study on *"Comparing social costs of biofuels and fossil fuels in Vietnam"*, Kannika Thampanishvong's study on *"Using Feedback as a Tool for Household Energy Conservation: An Experimental Approach"*, and Nuva's study on *"Impact of Eco-Labeled Indonesia's Smallholder Coffee Farmers"*. Loan's presentation was a good illustration of the long



Scenes from the policy dialogue on green economy in Vietnam (top and middle); Nguyen Dinh Thong, Deputy Director of the Department of Planning and Investment reports on the implementation of policies for green growth in the province of Tien Giang (bottom).

process of research to ensure accuracy and validity of results. The findings also raised a number of related policy issues such as how “green” is the production of biofuel crops if this was to result in the conversion of land formerly allocated to food crops production; this also raises the issues of food security and opportunity cost of land.

For Kannika’s study, there was a lot of interest on whether the information provided by the study’s experimental design can generate both desirable and non-desirable behavioral responses as well as the sustainability of the energy consumption behavior beyond the research experiment period.

Among the other country experiences shared were Vietnam’s green growth strategy and action plan at the national and provincial levels; Vietnam’s low carbon rice farming model; Taiwan’s success stories in solid waste management and the use of “terror theory” in green marketing; and Myanmar’s platform for dialogue on green growth.

Other topics covered included the economic tradeoffs in shifting from “brown” to green economy; balance between attracting foreign direct investment while meeting green growth objectives; policies in encouraging renewable energy production; raising consumer awareness about the environment and the responsibility of the manufacturers; and plans and programs of action towards developing green cities.

Seventy (70) participants attended the event comprised of policymakers from the Ministries of Planning and Investment, Ministries of Natural Resources and Environment, NGOs, and researchers from universities and research programs in Vietnam, Laos, Thailand, Indonesia, Malaysia, Myanmar, the Philippines, and Taiwan. The dialogue was televised on HTV7 (11 March) and HTV9 (13 March), the two Ho Chi Minh City news channels which cover the southern half of Vietnam.

EEPSEA leads in conference on conservation financing

With the DENR-USAID Philippines Biodiversity and Watersheds Improved for Stronger Economy and Ecosystem Resilience (B+WISER) Program and the ASEAN Centre for Biodiversity (ACB), EEPSEA sponsored the *International Conference on Conservation Financing in Southeast Asia*.

The conference brought more than 90 experts together with practitioners of conservation finance to share recent knowledge and discuss lessons learned from successful conservation finance schemes in the region. It focused on mechanisms that are scalable and repeatable to other conservation areas. Conservation finance experts, key government officials and environmental policymakers, park managers of conservation areas, and noted resource and environmental economists in Southeast Asia attended the event. The conference was also livestreamed to reach out to others who are engaged in biodiversity conservation and forest management.



From the top: EEPSEA Deputy Director Dr. Pham Khanh Nam welcoming the participants of the regional dialogue on green economy; the regional dialogue on green economy as hosted by the University of Economics Ho Chi Minh City; EEPSEA Resource Person Dr. Daigee Shaw during his presentation at the regional dialogue in Vietnam; and EEPSEA researchers Kannika and Loan during their presentation of their EEPSEA-funded studies.

The conference informed government officials on processes to develop conservation financing programs in support of sustainable management of protected areas in the region. In particular, it provided inputs to the upcoming development of a Road Map for Financing Philippine protected areas to boost environmental resiliency and help the country become more stable and prosperous. Furthermore, among the objectives of the conference was to seek innovative financing schemes that mobilize funding and community action needed to provide the long-term sustainability and improved livelihoods to forest dependent communities in the region.

Researchable areas to enhance the role of conservation financing in protected area management were also identified. These included conservation financing for ecosystems services, consumption goods, nature-based recreation, coastal habitats, and marine ecosystems. The EEPSEA cross-country study on the *“Fiscal Gap and Financing of Southeast Asia’s Protected Areas”* was one of the keynote presentations during the event; the study results were well received by the conference participants.

The conference participants are optimistic that the conference will yield partnerships and improve networking. This, in turn, will boost conservation efforts through conservation financing, which will require a lot of effort but potential benefits can last for generations.



EEPSEA Director Dr. Herminia Francisco during the *International Conference on Conservation Financing* in Manila, Philippines (*top*). Dr. Francisco with the EEPSEA speakers during the conservation financing conference (*bottom*).

SECTION 3

Increasing the visibility of EEPSEA researchers and their outputs

Part of EEPSEA's strategy to facilitate the uptake of EEPSEA research results is to conduct events and invest in effort to increase the visibility of EEPSEA researchers and their outputs. Hence, the Program provides its research grantees with travel support to participate in international and regional conferences. Research outputs are also packaged into the Program's various print publications, which are also made available and disseminated through online channels, primarily through the EEPSEA website and the Research Papers in Economics (RePEC) database.

1. Presentation of research results in regional and international conferences

The Program provides travel support to its researchers so they may participate in conferences that EEPSEA sponsors as well as those organized by other institutions. EEPSEA researchers' participation in such events not only allow research grantees to present and disseminate the findings of their EEPSEA-funded research to the wider scientific community, it also allows them to participate in discussions on issues pertaining to environmental and resource economics. Attendance in such events also gives EEPSEA researchers a chance to network with other researchers and receive feedback on their work. The EEPSEA director and her Senior Economists also attend such events to contribute in discussions on emerging issues in environmental and resource economics.

Travel grants to EEPSEA regional partnership events

This fiscal year, EEPSEA provided travel support for its researchers to participate in two EEPSEA-sponsored conferences. The first was the **2nd International Conference on Agricultural and Rural Development in Southeast Asia** organized by the Southeast Asian Regional Center for Graduate Study and Research in Agriculture's (SEARCA), wherein EEPSEA convened a session on Climate Change Adaptation. The session was moderated by EEPSEA Director Herminia Francisco. Dr. Canesio Predo, Dr. Asa Jose Sajise, and Mr. Phung Thanh Binh presented the following EEPSEA studies during the Program's session, respectively:

- *"Determinants of Household Decisions on Adaptation to Extreme Climate Events in Southeast Asia"* by H. A. Francisco, C.D. Predo, A. Manasboonphempool, R. Jarunggrattanapong, P. Tran, B.D. The, L. Penalba, N.P. Tuyen, T.H. Tuan, D. Elsigue, Y. Shen, and Z. Zhu



- *"Economic Analysis of Public and Autonomous Adaptation Against Climate Hazards in Coastal Areas: Lessons from A Cross Country Study"* by Asa Jose U. Sajise, Kim Bayani-Arias, Maripaz L. Perez, Paul Joseph Ramirez, and Glaiza J. Zamora

- *“Mediation Analysis of Factors That Influence Private Flood Mitigation Behavior in Developing Countries: Evidence from the Mekong Delta, Vietnam”* by Phung Thanh Binh, Xueqin Zhu, Rolf Groeneveld, Ekko van Ierland

The EEPSEA session’s contribution is on the issue of improving resilience through adaptation in rural sectors in different Southeast Asian countries. The papers mainly answered the following general research questions: a) *Why do people pursue adaptation (or mitigation) options?* and b) *What are viable location specific public adaptation measures?* The results of the micro-level studies that composed the session are important because, even though climate change (and its related hazards) is a form of global externality, solutions and reactions are often done at the local or micro level. Understanding the answers to these questions can lead to better policies or incentives to increase adaptation both at the household and community level.

The second EEPSEA-sponsored event wherein the Program supported the participation of 20 researcher-presenters is the **East Asian Association of Environmental and Resource Economics’ (EAAERE) 2014 Inter-congress Conference**, which was held in collaboration with University of Indonesia’s Faculty of Economics.



EEPSEA’s travel support contributed to the strong participation of Southeast Asian environmental economists in the event, with almost two thirds of the conference presenters hailing from the region; of the 86 conference presentations, 38 were papers presented by EEPSEA researchers. According to the conference organizers, this enhanced the quality of the conference and also ultimately helped Southeast Asian environmental economists improve the quality of their work. Topics discussed in the conference include environmental valuation, climate change, air pollution, agriculture, toxic management, energy, water, disaster management, forests and parks, pricing policy, governance, green economy, and national accounting.

Travel grants to other conferences and workshops

This fiscal year, EEPSEA supported the attendance of five researchers in three conferences organized by other institutions. The first is the **2014 World Congress of Environmental and Resource Economists** (WCERE), which was attended by EEPSEA Director Herminia Francisco, Dr. Orapan Nabangchang, Dr. Pham Khanh Nam, and Mrs. Kunlayanee Pornpinatepong of Prince of Songkla University.

Two papers from EEPSEA-funded research projects were presented at the conference:

- *“How fishermen respond to different policy options: A field experimental test”* by Mrs. Kunlayanee Pornpinatepong
- *“Altruism, cooperation, and trust: Other-regarding behavior and collective actions in Thailand”* by Rawadee Jarungrattanapong

Dr. Pham Khanh Nam also attended the event to join the Gothenburg University - Beijer Institute meeting to briefly present on the development of the research theme on the mangrove aquaculture ecosystem in Southeast Asia. This is part of the development of a research proposal on ecology and economics in developing countries that was discussed during the Beijer Institute meeting in Cape Town last October 2013.



As a regional network, EEPSEA's presence at such a congress is important as EEPSEA research presentations show donors and colleagues that the Program can produce good quality research. Moreover, EEPSEA researchers are given the opportunity to be exposed to discussion on the current directions taken by environmental and natural resource economics research at the international level.

In addition to the World Congress, EEPSEA supported the participation of seven (7) other researchers to four conferences, as listed in Table 3. Their attendance afforded them the opportunity to network with colleagues from other countries. Noteworthy is the Memorandum of Understanding (MOU) that resulted from Dr. Kim Anh Nguyen's networking with Filipino researchers during the ISCFAS conference. Under this MOU between Nha Trang University and the University of the Philippines Visayas, it is hoped that there is a chance to develop collaborative programs since the universities have similar programs and research activities.

Table 3. Recipients of EEPSEA travel grants to conferences and their respective papers presented

Conference	Date & Venue	EEPSEA Researcher	Paper presented
11 th Annual Meeting of the International Water Resource Economics Consortium	7-9 Sep 2014, Washington D.C., USA	Dr. Arriya Mungsunti	<i>Estimating the Economic and Environmental Benefits of a Traditional Communal Water Irrigation System: The Case of Muang Fai in Northern Thailand</i>
International Scientific Conference on Fisheries and Aquatic Sciences (ISCFAS): Towards Disaster and Climate Resilience	22-24 Oct 2014, Iloilo, Philippines	Dr. Kim Anh T. Nguyen	<i>Climate Change Vulnerability Index and Cost-Effectiveness of Adaptations in Vietnam</i>
Australian Agricultural and Resource Economics Society Annual Conference	10-13 Feb 2015, Rotorua, New Zealand	Dr. Zanzin Wang	<i>The impacts of second generation biofuel policy on regional economy and carbon emission reduction: A case of Jatropha biodiesel in China</i>
		Ms. Yen Dan Tong	<i>Dyke heightening in the Vietnamese Mekong Delta: A cost-benefit analysis</i>
		Dr. Pham Thi Thanh Thuy	<i>Ecotourism: Good for biodiversity conservation and community economic well-being? An analysis of Nha Trang Bay Marine Protected Area in Viet Nam</i>
		Ms. Khairunnisa Ahmad Kamil	<i>Economic valuation of recreational fishing in the Pulau Sembilan State Park of Perak, Malaysia</i>
Society for Benefit-Cost Analysis Annual Meeting and Conference	19-20 Mar 2015, Washington, D.C., USA	Dr. Phumsith Mahasuweerachai	<i>WTP or WTA: Determining the Appropriate Measure When Preferences Are Reference Dependent</i>

Presentation of studies at conferences and policy forums

EEPSEA research grantees are encouraged to disseminate their research findings so that they may be used to inform policy discussions and formulations and affect change. Hence, aside from those stated above and through their own efforts, the results of seven EEPSEA-funded research studies were presented in 14 different conferences and policy forums as reported by the EEPSEA research grantees during the November 2014 tracer survey (see Appendix D for list of conferences and policy forums where EEPSEA research were presented).

2. EEPSEA publications

EEPSEA generates several types of publications, namely: research reports, policy briefs, books and other special publications. All are available electronically for web download at the EEPSEA website (www.eepsea.org). Some have versions translated in the local dialect to facilitate research results dissemination to local policymakers and natural resource managers. Most have a hard copy version, which the Program sends to selected university libraries all over the region.

Research reports

This fiscal year, EEPSEA published 3 research reports from its completed SRGs and 10 research reports from its completed CRGs, as listed below. A summary of each report published is provided in Appendix E.

2014-SRG1: Old Livelihoods under New Climate: Assessing Potential Adaptation Strategies in Gubat, Sorsogon and Labo, Camarines Norte, Philippines

2014-SRG2: Adaptation and Coping Strategies to Extreme Climate Conditions: Impact of Typhoon Frank in Selected Sites in Iloilo, Philippines

2014-SRG3: An Analysis of the Recreational Use Value of Apo Island, Philippines

2015-RR1: Eliminating the Fuel Subsidy in Indonesia: A Behavioral Approach

2015-RR2: Mediation Analysis of Factors that Influence Private Flood Mitigation Behavior in Developing Countries: Evidence from the Mekong Delta, Vietnam

2015-RR3: Estimation of River Flood Damage in Jakarta: The Case of Pesanggrahan River

2015-RR4: Economic Valuation of Health Impacts of Haze Pollution in Malaysia

2015-RR5: Consumer Willingness to Pay for Eco Labels in China

2015-RR6: Biofuel Production in Vietnam: Cost Effectiveness, Energy and GHG Balances

2015-RR7: Quantitative Analysis of Household Vulnerability to Climate Change in Kampong Speu Province, Cambodia

2014-RR8: Using Reservoirs to Adapt to Drought in Agriculture: A Cost-Benefit Analysis from Cambodia

2015-RR9: Estimating the Impact of Weather Shocks on Agricultural Production and Migration in China

2015-RR10: Downscaling REDD Policies in Developing Countries: Assessing the Impact of Carbon Payments on Household Decision-making and Vulnerability to Climate Change in Vietnam



EEPSEA Research Reports are outputs of research projects supported by the Program. All have been peer reviewed and edited. In some cases, longer versions may be obtained from the author(s). Selected Research Reports are sent biannually to selected university libraries all over Southeast Asia.

Policy briefs

This fiscal year, eight (8) policy briefs were produced:

2014-PB8: Valuing the Benefits of Forest Conservation: A Study from Southern Thailand

2015-PB1: How to Best Phase Out Non-optimal Subsidies: The Case of Indonesia's Fuel Subsidy

2015-PB2: What Factors Make People Act to Protect Themselves from Floods? A study from Vietnam

2015-PB3: The Cost of Flooding in Jakarta

2015-PB4: Economic Losses from the 2011 Thailand Floods: A Study of Bangkok Metropolitan Region

2015-PB5: The Cost of Health Impacts of Haze Pollution in Malaysia

2015-PB6: Are Biofuels an Environmentally-friendly Choice for Transport? A Study from Vietnam

2015-PB7: Are Consumers Willing to Pay for Eco Labels in China?



EEPSEA Policy Briefs summarize the key findings generated by EEPSEA-supported research projects and provide policy recommendations based on these results.

Books and translations

Two EEPSEA books were published this fiscal year, namely: a) *“Cost-Benefit Studies of Natural Resource Management in Southeast Asia”* and b) *“Fishery and Coastal Resource Economics & Institutions”*. The first book is co-edited by Dr. David James and Dr. Herminia Francisco. It was printed by Springer as an online publication. EEPSEA is allocating funds to print hard copies that will be distributed to various universities and colleges in the region. The book features 15 select studies that highlight how cost-benefit analysis (CBA) is used to understand and/or evaluate solutions to natural and environmental problems. The intent is to provide researchers with a reference material that will demonstrate how they can use CBA to support improved natural and environmental management in their own countries.

The second book is a collection of EEPSEA-funded research on fishery and marine coastal resources. It is divided into three sections. Part 1 consists of seven studies that value the services of marine resources (i.e., coral reefs, sea grasses, and marine protected areas) including the valuation of endangered species conservation. Part 2 features four studies that cover the valuation of damages to coastal resources such as overstocking of fish cages, overfishing, and land reclamation. The last section includes studies that looked into fishery policies and institutions governing marine resource management. This book is co-edited by Dr. Nancy Olewiler, Dr. Herminia Francisco, and Dr. Alice Ferrer.

Two EEPSEA publications this year are translations of past publications and studies. The *“Economics of Environmental Management in Vietnam”* by Bui Dung The and Herminia Francisco, which was originally published in 2010, was translated into Vietnamese, reprinted and disseminated locally within Vietnam. Also, upon the request of the Thai Department of Marine and Coastal Resources (DMCR), several EEPSEA studies related to the economics of marine and coastal resources were summarized and translated into Thai.

3. Online dissemination efforts

EEPSEA makes use of online channels to disseminate its various publications as well as increase the visibility of the Program and its activities. Primarily, the Program focuses its web-based efforts in disseminating its outputs through its own website (eepsea.org) and through the Research Papers in Economics database (<http://repec.org>).

Website visits and downloads

Late July 2014, EEPSEA launched its new website. The new home page now provides a more complete idea of what EEPSEA does and offers. It provides a quick link to announcements about upcoming events, new knowledge products, and activity highlights.



From the top, clockwise: The cost-benefit analysis book printed with Springer, the Vietnamese translation of the book *“Economics of Environmental Management in Vietnam”*, and the Thai translation of select EEPSEA studies on the economics of marine and coastal resources.



EEPSEA's new website, which was launched late July 2014. It now includes a more comprehensive publication search function.

The features of the new website are based on the results of the EEPSEA website user survey conducted last fiscal year. Among the significant changes done is the EEPSEA publication search function, which now allows users to search EEPSEA publications by year, research area, research topic, and analytical framework. This feature is seen as useful especially for researcher-users.

As of end of February 2015, the new site has been visited 17,931 times by 12,137 unique visitors. The top ten countries where most website visitors are from are the Philippines, Vietnam, Indonesia, Thailand, Malaysia, USA, China, Australia, India, and Cambodia, respectively (see Appendix F). It is useful to note that seven of the 10 EEPSEA member countries are part of the top 10 website visitors.

It is noted that website visits increase during months when new research reports are uploaded. Based on download data, user downloads from the website are mostly of EEPSEA research and technical reports (Appendix F).

RePEC downloads and citations of EEPSEA reports

Since 2009, EEPSEA has listed three publication series (i.e., research reports, special and technical reports, policy briefs) in the Research Papers in Economics (RePEC) database (<http://repec.org>). As of December 2014, the papers in RePEC have been downloaded 15,987 times or at a monthly average of 232 times. The average number of downloads per month experienced a decrease in 2012, during the EEPSEA move from IDRC to WorldFish wherein no new research reports were published (Figure 1). However, downloads is on the rise again in 2013 and 2014.

According to citation analysis by RePEC and through Google Scholar, EEPSEA publications have been cited by 2,354 papers since 2009. Of this, 673 papers cited EEPSEA publications in 2014. This is a big jump from last year's, when 112 papers cited EEPSEA publications.

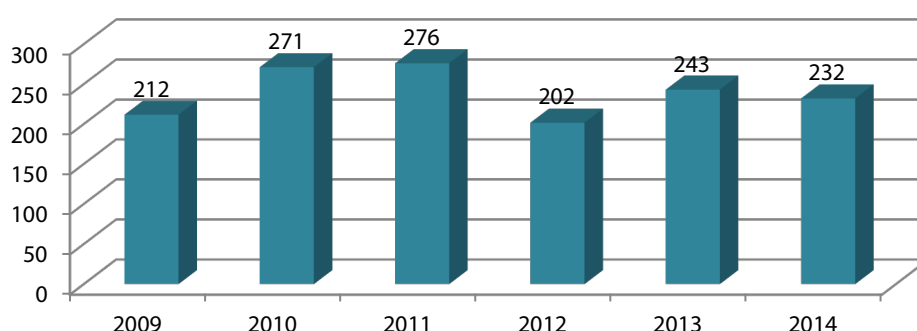


Figure 1. Average monthly download of EEPSEA publications in RePEC²

4. Citations in media

As a result of EEPSEA's efforts to increase its visibility, the Program achieved 15 media citations during the reporting period (Table 3). Most of the citations are based on the two knowledge events EEPSEA held in 2014 (i.e., Conference on the Economics of Climate Change in February 2014; 2014 Annual Conference in May 2014).

² Does not include direct downloads from EEPSEA website.

Table 3. EEPSEA media citations in 2014

Article Title	Link	EEPSEA Study/Publication Cited
"Analysis of forest carbon sequestration and carbon trading ability to protect tropical forest biodiversity" in www.tanpaifang.com (2 Mar 2014)	http://www.tanpaifang.com/tanhui/2014/0302/29560.html ; http://www.gokunming.com/en/blog/item/2993/interview_economic_cologist_yi_zhuangfang	"Where Can Payment/Rewards For Ecosystem Services Tip The Rubber Monoculture To Rainforest Recovery In Xishuangbanna, China?" by Zhuangfang Yi
"Tackling climate change research in Southeast Asia" in Philippine EnviroNews (5 Mar 2014)	http://environews.ph/climate-change/tackling-climate-change-research-in-southeast-asia/	Reference to the Conference on the Economics of Climate Change
"Climate change research works focus more in Southeast Asia" in Philippine EnviroNews (8 Mar 2014)	http://environews.ph/climate-change/1706/	Reference to the Conference on the Economics of Climate Change
"Asia's food security in 2050 is in crisis, says EEPSEA study" in Philippine EnviroNews (10 Mar 2014)	http://environews.ph/climate-change/asias-food-security-in-2050-is-in-crisis-says-eepeea-study/	"Adaptation behavior to sea level rise situation of the Vietnamese Mekong River Delta: Should a sea dike be built?" by Vo Thanh Danh ; "Estimating the impact of weather shocks on agricultural production and migration in China" by Yazhen Gong
"Cushioning the impacts of climate change" in Punto! Pananaw ng Malayang Pilipino (24 March 2014) and The Daily Guardian (28 March 2014)	http://punto.com.ph/News/Article/20064/Volume-7-No-109/Opinion/Cushioning-the-impacts-of-climate-change ; http://thedailyguardian.net/index.php/iloilo-opinion/39795-cushioning-the-impacts-of-climate-change	"Hotspots! Mapping Climate Change Vulnerability in Southeast Asia" by Arief Yusuf and Herminia Francisco
"IPs use new farming method" in SunStar Davao (7 April 2014)	http://www.sunstar.com.ph/davao/business/2014/04/07/ips-use-new-farming-method-336984	"Hotspots! Mapping Climate Change Vulnerability in Southeast Asia" by Arief Yusuf and Herminia Francisco
"Environmental economics research increasing, becoming more relevant in Southeast Asia" in Philippine EnviroNews (12 May 2014)	http://environews.ph/international/collaboration-a-major-force-behind-the-increase-in-south-east-asias-research-productivity/	Reference to the EEPSEA Annual Conference
"Water hyacinth project turns nuisance plant into potential source of biogas" in GMA News Online (12 May 2014)	http://www.gmanetwork.com/news/story/360715/scitech/science/water-hyacinth-project-turns-nuisance-plant-into-potential-source-of-biogas	"An Economic Analysis of the Use of Water Hyacinth for Phytoremediation and Biogas Production in Dianchi Lake, China" by Zanzin Wang and Jin Wan
"Asia environmental economic researchers to boost local, quality research" in Philippine EnviroNews (18 May 2014)	http://environews.ph/international/asia-environmental-economic-researchers-to-boost-local-quality-research/	Reference to the EEPSEA Annual Conference
"EEPSEA-funded research soaring" in Philippine EnviroNews (20 May 2014)	http://environews.ph/international/eepeea-funded-research-soaring/	Reference to the EEPSEA Annual Conference
"Sogod Bay losing its fishery resources" in Punto! Pananaw ng Malayang Pilipino (22 May 2014) and SunStar Davao (26 May 2014)	http://punto.com.ph/News/Article/20503/Volume-7-No-131/Opinion/Sogod-Bay-losing-its-fishery-resources	"Assessment and valuation of natural assets in the aquatic agricultural systems of Sogod Bay, Southern Leyte, Philippines: A baseline study" by Salome Bulayog
Sustainable Fisheries Management: A Case Study in Songkhla Lake (Sections 1 & 2) in ASTV Manager Online, Southern Media (7 & 8 Oct 2014)	http://www.manager.co.th/South/ViewNews.aspx?NewsID=9570000115326 http://www.manager.co.th/South/ViewNews.aspx?NewsID=9570000115792	"Pollution Control and Sustainable Fisheries Management in Songkhla Lake, Thailand" and "Response of Fishermen to Fishing Control Policies in Southern Songkhla Lake, Thailand: A Field Experiment" by Kunlayanee Pornpinatpong
PSU88 radio station and PSU news, Prince of Songkhla University	http://www.psuradio88.com/2014/index.php?option=com_content&view=article&id=190:2014-08-01-04-07-11&catid=91:2014-01-22-04-20-34&Itemid=1303 http://www.psu.ac.th/th/node/6550	
Thai translations of the brief of the studies at the website of the Department of Marine and Coastal Resources, Ministry of Natural Resources and Environment	http://dmcr2014.dmcr.go.th/library.php?WP=qmOZG22DM7y04TyTrTZo7o3Q http://dmcr2014.dmcr.go.th/home.php	
Low-tech gadget is key in saving lives in southern Thailand, says EEPSEA study	http://environews.ph/international/low-tech-gadget-is-key-in-saving-lives-in-southern-thailand-eepeea-study/	"Determinants of Flash Flood Evacuation Choices and Assessment of Preferences for Flash Flood Warning Channels: The Case of Thailand" by Kannika Thampanishvong

Also, as part of the Program's efforts to increase its visibility in the media, EEPSEA periodically conducts short courses that aim to improve its research grantees' skills in disseminating the results of their research studies. This fiscal year, the Program conducted a one-day news writing workshop facilitated by Filipino science journalist Henrilito Tacio. It was attended by 14 EEPSEA researchers about to complete their respective research studies. The event aimed to equip them with knowledge on how to develop news articles that highlight the relevance of their research findings. This is a skill that EEPSEA believes environmental economics researchers should develop in order to increase research influence in policymaking.

5. EEPSEA studies in non-EEPSEA publications

Also during this fiscal year, EEPSEA studies were cited in or served as basis in the production of three non-EEPSEA publications, namely:

- a) The USAID-CIFOR working paper *"A review of the legal and policy framework for payment for ecosystem services in Thailand"* (O. Nabangchang, 2014), which discussed the findings of the EEPSEA exploratory study *"Payment for Ecosystem Services for Thailand and Lao PDR"* (Jarungrattanapong, Mahasuweerachai and Nabangchang, 2004).
- b) Two SEARCA publications: a) *"Faces of Vulnerability: Gender, Climate Change, and Disaster"*; and b) *"Climate Change Vulnerability Mapping of Selected Municipalities in Laguna, Philippines"*. These are based on the Philippines study managed by SEARCA, which is part of the three-country EEPSEA research project entitled *"Building Capacity to Adapt to Climate Change in Southeast Asia"*.
- c) The book chapter *"Climate change adaptation in agriculture in Cambodia"* in *"Adaptation to Climate Change in Asia"* (Vachani and Usmani, 2014). The chapter was written by one of the Cambodian researchers part of the three-country EEPSEA research project entitled *"Building Capacity to Adapt to Climate Change in Southeast Asia"* based on the results of the EEPSEA study.



From the top, clockwise: The USAID-CIFOR working paper, the book containing a book chapter on climate change adaptation in Cambodia, and the two SEARCA publications, all of which discuss or are based on the results of EEPSEA research studies.

SECTION 4

Safeguarding the sustainability of capacity building in environmental economics research in the region

To ensure the sustainability of capacity building activities in environmental economics research in Southeast Asia, EEPSEA collaborates with national and regional organizations in the conduct of its training courses as well as supports the development of a community of environmental economists in the region.

1. Strengthening links with national and regional organizations

This fiscal year, all of the seven (7) EEPSEA in-country events and one (1) regional event were conducted in partnership with national organizations that provided human resources as counterpart to EEPSEA's financial support. EEPSEA partnered with the following national organizations this fiscal year:

- a) **Department of Economics, University of the Philippines Los Baños** during the conduct of the *Introductory Course on Environmental and Experimental Economics in the Philippines*;
- b) **Faculty of Development Studies, Royal University of Phnom Penh** during the conduct of the *Environmental Economics Training for Lecturers and Researchers in Cambodia*;
- c) **Faculty of Economics, Prince of Songkla University** during the conduct of the *Policy Dialogue on Sustainable Lake Management* and the *Seminar on the Policy Alternative for Sustainable Sandy Beach Management and Conservation*;
- d) **School of Economics and Business, Cantho University** during the conduct of the *Policy Dialogue on Priority Drinking Water Options and Arsenic Health at the Mekong Delta*;
- e) **Myanmar Co-operative University** during the conduct of the *Short Course on Environmental Economics in Myanmar*; and
- f) **University of Economics Ho Chi Minh City** during the conduct of the *Policy Dialogues on Green Economy in Vietnam and in Southeast Asia*.

On the other hand, EEPSEA partnered with the following regional organizations in the conduct of four of its regional events this fiscal year:

- a) **ECO-BEST** (Enhancing the Economics of Biodiversity and Ecosystem Services in Southeast Asia) and the **ASEAN Centre for Biodiversity** (ACB) during the conduct of the *International Training Course on Biodiversity Valuation and Payment for Ecosystem Services*;
- b) **Southeast Asian Regional Center for Graduate Study and Research in Agriculture** (SEARCA) during the conduct of its *2nd International Conference on Agricultural and Rural Development in Southeast Asia* wherein EEPSEA convened a session on Climate Change Adaptation;
- c) **East Asian Association of Environmental and Resource Economics** (EAAERE) during the conduct of its *2014 Inter-congress Conference* wherein EEPSEA sponsored the participation of 20 researcher-presenters; and
- d) **USAID Biodiversity and Watersheds Improved for Stronger Economy and Ecosystem Resilience** (B+WISER) Program during the conduct of the *International Conference on Conservation Financing*.

2. Developing a community of environmental economists

As discussed above, EEPSEA supports environmental economics associations, such as the EAAERE, by sponsoring participants to its various knowledge events in order to contribute to the development of a community of environmental economists in the region. On top of this, the Program conducts its own activities in order to support plans to establish Environmental Economics Institutes in its member countries so that they may continue EEPSEA's legacy of capacity building through research mentoring of young researchers and the conduct of training courses once EEPSEA closes shop on October 2016. The need to establish Environmental Economics Institutes came about during the Program's 2014 Annual Conference wherein there was a comprehensive discussion on charting EEPSEA's future.

Charting EEPSEA's Future: The need for country-based Environmental Economics Institutes

During the 2014 EEPSEA Annual Conference, instead of another plenary talk as in previous EEPSEA conferences, the fourth plenary session was reserved for a breakout discussion to chart EEPSEA's future. Dr. Herminia Francisco gave a snapshot of EEPSEA's research projects in terms of topics, research tools, and country distribution based on the Program's 20 years of existence. She then presented the funding situation and her assessment that the future of EEPSEA is highly uncertain as the Canadian International Development Research Centre (IDRC) is not likely to fund EEPSEA beyond the current phase.

As such, she invited the various stakeholders of EEPSEA (i.e., researchers, resource persons, policymakers, partner international organizations working in the region) to share their insights by answering questions that EEPSEA management prepared in consultation with its donors. Dr. Nancy Olewiler helped facilitated this session. Five breakout groups were created with each given a different set of questions to discuss.

The ***policymakers*** discussion group, composed of six members from Cambodia, Indonesia, Thailand, Myanmar, Vietnam, identified the following as the top three research topics that they believe environmental economists should prioritize: a) pollution and urban waste management; b) biodiversity and ecosystem valuation; and c) climate change. Specifically, they identified the following research questions as those they need assistance on:

- a) What environmental damages does development bring about?
- b) How can land allocation efficiency be improved, from an environmental point of view, by identifying areas with high conservation value?
- c) What are the economic costs and benefits of decentralizing resource management?

The group sees EEPSEA's role as evolving into an organization that can provide support to the ASEAN government on economy and environment linkages.

Interestingly, the ***international resource persons*** have a different perspective on what areas they would encourage researchers to work on, which is not surprising as their perspective is based on areas where there can be more academic contribution made. They identified the following areas: a) behavioral economics (i.e., accounting stance or mental frame); b) linking SEA environmental issues with global environmental concerns (i.e., covers climate change and biodiversity as well); and c) health economics and urban issues.

The policymakers see EEPSEA's role as evolving into an organization that can provide support to the ASEAN government on economy and environment linkages.



The international resource persons cautioned EEPSEA researchers against taking an "advocacy stance" or doing studies in support of a decided policy as this may lead to loss of research credibility in the field.

In terms of new things to venture on, they suggest trying the massive open online courses (MOOCs) for EEPSEA courses, particularly if these can be done in local languages. They also suggested organizing as a side event to EEPSEA conferences structured field trips to areas that highlight environmental issues. While such field trips may not be manageable with 60 conference participants, these can probably target a particular group with specific interest.

They also advise the Program to prioritize countries that really need help and to link SEA researchers with those from other networks in Latin America, Central Africa and South Asia. This has been raised in the past and is worth pushing through more strongly now. They have no specific recommendation regarding EEPSEA's structure as they believe this is something that EEPSEA itself should decide and think more seriously about – particularly in terms of how it can generate revenue while also fulfilling its capacity building mandate.

In conclusion, they cautioned EEPSEA researchers against taking an “advocacy stance” (i.e., doing studies in support of a decided policy) as this may lead to loss of research credibility in the field.

The EEPSEA **senior researchers and alumni** (composed of 15 members, two of which are members of the EEPSEA advisory committee) and the **junior researchers** (composed of three sub-groups with 13-14 junior researchers per group) made a strong case for maintaining the EEPSEA recipe of providing:

- a) researchers with mentoring support, particularly by international resource persons which cannot be substituted by regional resource persons;
- b) a platform (i.e., conference and other knowledge events) for meeting other researchers; and
- c) research grants and training support.

Like the international resource persons, the senior researchers and alumni prioritize research grants to researchers from countries like Lao PDR, Myanmar and Cambodia. On the other hand, the junior researchers think that individual competitive research grants (open for all countries) should remain EEPSEA's top priority—even if it also supports providing small research grants for low-capacity countries.

In terms of structure, EEPSEA alumni support the idea of the Program evolving into a society with membership fee. Such a society can also offer training courses for a fee and can bid for international and national projects. The junior researchers suggest that EEPSEA establish country offices that can help implement (and hopefully sustain) the program activities in the future.

Finally, the four representatives of **international GOs and NGOs** welcome any opportunities to work with environmental economists from the EEPSEA network. They want help in undertaking meta-analysis and literature review and research on urban issues. The preferred mode of collaboration is through sharing of expertise and resources and, possibly, joint-proposal development.



The EEPSEA researchers support the idea of EEPSEA evolving into a society with membership fee. The junior researchers suggest that EEPSEA establish country offices that can help implement the program activities in the future.

The international GO and NGO representatives want help in undertaking meta-analysis and literature review and research on urban issues.

Resource mobilization course

As a result of the charting done during the 2014 Annual Conference, plans to establish country-based Environmental Economics Institutes were further discussed. Foremost in these discussions was the need for these country Institutes to find the needed funding to support research awards and trainings courses, which were identified during the Conference breakout groups as an integral part of EE research capacity building in the region. This led to the conduct of the course on **Resource Mobilization for Research Funds**, which was attended by 13 of the Program's university-based researchers from Lao PDR, Cambodia, Thailand, Philippines, Vietnam, Indonesia, and Malaysia.

The course was facilitated by Dr. Marianne Quebral, Asian Institute of Management's Vice President for Institutional Advancement. EEPSEA Director Herminia A. Francisco, WorldFish Regional Director for Asia Maripaz L. Perez, and four other staff members from the WorldFish Philippine-Country Office also participated in the course discussion. Focus was on how to conduct donor mapping and tips in packaging grant proposals to fund environmental economics research and capacity building initiatives in the future, for possible submission to donors.



Participants of the resource mobilization course during the donor mapping exercise.

SECTION 5

Stories of our policy and community influence

Through the years, EEPSEA research results have been used to inform environmental policies and natural resource management strategies at the local and national levels, both through the Program's and its researchers' efforts. Presented here are some stories of the policy and community influence made by EEPSEA studies as shared by EEPSEA research grantees through the Impact Tracer Survey conducted last November 2014. In summary, EEPSEA studies create impact and influence by:

- a. **Affecting the well-being of the intended beneficiaries.** Twelve (12) out of the 26 researchers who answered the tracer survey indicated this influence and the details of three (3) not reported in previous years' progress report are discussed below (i.e., Bradecina; Zhuangfang Yi; Anda).
- b. **Supporting environmental regulation and national policy agenda.** Nine (9) researchers indicated this influence and the details of five (5) not previously reported are further discussed below (i.e., Bradecina; Haitao Yin; Pornpinatepong; Tran Tuan Anh; Anda).
- c. **Creating further interest in the issue by being invited to develop another research project.** Seven (7) researchers reported this and the details of three (3) are discussed below (i.e., Haitao Yin; Pornpinatepong; Zhuangfang Yi).

Research inputs into local tourism master plan

As a follow up on the use of the research results of the project entitled *"Economic Valuation of the Beachscape Beauty of Caramoan, Camarines Sur, Philippines: Towards Establishing Payment for Environmental Services for Sustainable Eco-Tourism"* by Partido State University's Raul Bradecina as reported last year, the Partido Development Administration (PDA) commissioned Bradecina's university, with him as the project leader, to develop the tourism master plan for the Partido area, the fourth congressional district of Camarines Sur province composed of ten municipalities. PDA is a government-owned and controlled corporation that coordinates, implements, and evaluates trans-municipal plans and projects in the district.

The key insights and recommendations from Bradecina's EEPSEA research study were integrated into the strategies and action plans of the tourism master plan. They created a chapter strategy on sustainable tourism and coastal resource governance through sustainable fund generation by establishing a user fee system in Caramoan and in every coastal local government unit (LGU) in the district. In this user fee system, a section was provided defining who will be the collecting entity, the mechanisms for collection and safekeeping of the user fees, and how these will be allocated (with fixed percentages of fund allocation) to ensure that the fees collected are automatically allocated for: a) restoring and enhancing of coastal ecosystems and tourism assets; b) providing livelihood to fisher folks and upland farmers; c) incentivizing *Bantay Dagat* (a community-based volunteer sea patrol organization) and the marine protected area management council; and d) information, education and communication (IEC) campaigns, among others. This will be institutionalized by LGU ordinances.



Key insights and recommendations from Bradecina's EEPSEA research study were integrated into the strategies and action plans of the Partido area tourism master plan.

The tourism master plan was unanimously approved in session by the PDA Governing Board last August 2014. It will be implemented by PDA, which is mandated by law to orchestrate the overall development directions of LGUs in the area with full backing of the district congressman.

Research catches attention of China's National Institute of Standardization

During the data gathering phase of Haitao Yin's research project on *"Protecting the Environment by Informing Customers in China"*, his team initiated discussions with officials from the China National Institute of Standardization, which plays an active role in policy formulation, implementation and research. This resulted in the formation of a research partnership. The results of Haitao's research will be featured during the conference that the Institute will organize in celebration of the tenth anniversary of the establishment of the China Energy Efficiency Label. The conference expects a wide media coverage, which will further promote the impacts of the study. The research team was also invited to participate in the Institute's study on a related policy, the subsidy for energy saving home appliances. This partnership with the Institute, which plays an important role in China's policy formulation, is seen as an avenue for the team's research to inform the next round of policy reforms.

Haitao, an Associate Professor at Shanghai Jiao Tong University, was also invited by China National Natural Science Foundation to submit a proposal on *Environmental Information Management and Policy in China* as a result of this study. His proposal has been approved and funded.



Haitao's EEPSEA research results will be featured during a conference by China's National Institute of Standardization in celebration of the tenth anniversary of the establishment of the China Energy Efficiency Label.

Lake management studies used by local Thai Department of Fisheries

Kunlayanee Pornpinatepong's research studies on Songkhla lake management (i.e., *"Pollution Control and Sustainable Fisheries Management in Southern Songkhla Lake, Thailand"* and *"Response of Fishermen to Fishing Control Policies in Southern Songkhla Lake, Thailand: A Field Experiment"*) were used as input during a workshop organized by Songkhla province's Southern Marine Fishery Resource Unit of the Department of Fisheries. The workshop aimed to propose the creation of a community co-management lake conservation project. The studies' results were shared with the workshop participants to illustrate the effectiveness of a co-management scheme among fishermen.

Moreover, Kunlayanee and her team were asked by other funding agencies (i.e., Thai Universities for Healthy Public Policies, Thai Health Promotion Foundation) to develop a project based on their previous EEPSEA studies. Two projects were developed: a) *Public Policies for Sustainable Sandy Beach Utilization* (2012-2014); and b) *Public Policy Movement: A Case of Sandy Beach Utilization and Conservation* (2011-2012).

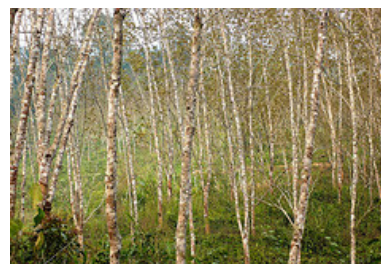


Kunlayanee's research studies on Songkhla lake management were used as input during a workshop organized by the Songkhla province Southern Marine Fishery Resource Unit to propose the creation of a community co-management lake conservation project.

Local alliance formed to lead PES efforts

Zhuangfang Yi's study on *"Where can payment/rewards for ecosystem services tip the rubber monoculture to rainforest recovery in Xishuangbanna, China?"* led to the formation of the Xishuangbanna Alliance during a workshop she organized and hosted last September 2014. The workshop was participated in by representatives from the local government, local businesses, the academic community and NGOs. The workshop aimed to encourage these sectors to work together in looking for a better incentive scheme and push for eco-friendly rubber in Xishuangbanna. The Xishuangbanna Alliance will take the lead in implementing PES schemes at the local level in the future.

It is also worth noting that the National Science Foundation of China has provided Zhunagfang Yi with funding to do further research based this EEPSEA study.



Zhuangfang Yi's EEPSEA study led to the formation of the Xishuangbanna Alliance, which will take the lead in implementing payment for ecosystem services schemes at the local level in the future.

Cost-benefit analysis of climate-resilient housing found useful in improving local awareness

Tran Tuan Anh, of the Hue University of Sciences, shared the results of his EEPSEA research study on *"Cost-Benefit Analysis for Climate-Resilient Housing"* during a meeting of the Loc Tri Commune Peoples' Committee. Representatives of local construction worker teams and at-risk households, village leaders, and those in charge of the commune's disaster management attended the meeting. They found the study results informative in terms of safe housing concerns and believe that it will be useful in improving local awareness on this topic. They suggested that the research results be popularized so that the conclusions (especially the comparison between resilient and non-resilient housing) can be better appreciated by laymen, particularly at-risk groups.

Basis for establishing a Conservation Trust Fund

In 2010, the Thai Department of National Park Wildlife and Plant approached Orapan Nabangchang to conduct an economic valuation of Doi Inthanon National Park, one of the most visited national parks in Thailand. For years onwards, the results of the study have been used to support the establishment of a trust fund that is used to finance Doi Inthanon conservation activities.

Study leads to innovative financing of protected areas in the Philippines

The results of the EEPSEA cross-country research project led by Gem Castillo entitled *"Fiscal Gap and Financing of Southeast Asia's Protected Areas: A Cross-Country Analysis"*, which includes Alexander Anda's study on *"Resource Gap and Benchmarking Protected Areas: A Case Study in the Philippines"*, have been presented in several fora, conferences, workshops and meetings within and outside of the region. In the Philippines, the results were presented during the following meetings:



Anda's EEPSEA study was cited in a policy to retain 75% of funds generated by a protected area.

(a) October 2011: To senior officers of the Protected Areas and Wildlife Bureau (PAWB) in connection with the proposed *Executive Order on Establishing the National Policy on the Protection of Identified Terrestrial Key Biodiversity Areas and Recognition of Other Forms of Governance of Conservation Areas*. Following the presentation of the cross-country analysis and the Philippine case study, the Bureau Director, in turn, presented the results to senior level officers of the Philippine Department of Environment and Natural Resources (DENR).

(b) November 2011: In a meeting in relation to the UNDP-GEF funded project “*Expanding and Diversifying the National System of Terrestrial Protected Areas in the Philippines*” project. The research results’ usefulness as justification for demanding more funding for the National Integrated Protected Areas System of the country was recognized. The meeting was attended by ASEAN Center for Biodiversity representatives, who recommended including ASEAN heritage sites in the assessment.

(3) June 2012: During the Protected Areas Management Boards Summit organized by the DENR, the cross-country analysis and the Philippine case study were again presented because of the growing interest with the results of the study,

(4) September 2012: During a technical discussion on Local Government Unit (LGU) Managed Conservation Areas by the *New Conservation Areas in the Philippines Project* (NewCAPP) as part of information materials for local government units, and

As a result of these presentations, the project has been cited by DENR-PAWB as one of the main basis that led to the Issuance of *Republic Act No. 10629*, which amends Section 16 of RA No. 7856 (*National Integrated Protected Areas System of 1992*) by providing for the retention by the Protected Area Management Board (PAMB) of 75% of the protected area revenue accruing to the Integrated Protected Area Fund (IPAF). RA 10629 was approved on September 26, 2013. Previously, PAMB can only retain 25% of the revenue.

DENR and the Department of Budget and Management (DBM) subsequently issued a joint circular on implementing RA 10629, which encourages the development of innovative financing for protected areas in the country. This was followed by a series of trainings and workshops by PAWB and DBM on alternative financing mechanisms geared towards Protected Areas Superintendents.

The cross-country project results have also been presented in conferences apart from EEPSEA, namely: the *1st Annual World Congress of Biodiversity* in Xian, China on March 2012, and as a plenary presentation during the *International Year of Forest Conference* at Michigan State University, October, 2011.

Management

EEPSEA management is composed of Dr. Herminia A. Francisco, Program Director; Dr. Pham Khanh Nam of the University of Economics Ho Chi Minh City as Deputy Director for Research; Dr. Orapan Nabangchang of Sukhothai Thammarat Open University as Deputy Director for Training and Partnership; and Senior Economists Dr. Arief Anshory Yusuf of Padjadjaran University in Indonesia, Dr. Bui Dung The of Hue University in Vietnam, and Dr. Canesio D. Predo and Dr. Asa Jose U. Sajise of the University of the Philippines Los Baños in the Philippines. All Deputy Directors and Senior Economists are long-standing EEPSEA researchers who continue to work from their home institutions.

The Secretariat is also supported by five other personnel: Dr. Noor Aini Zakaria, Research Manager; Ms. Julienne V. Bariuan, Grant Administrator and Training & Communication Manager; Ms. Mia Mercado and Ms. Jullie Ann Reyes, Program Assistants; and Ms. Rhona Coronado, Finance Officer.

Sponsors Group

The Sponsors Group of participating donors sets policy, provides financial support and approves the annual program of work and budget. It is comprised of representatives from:

- The International Development Research Centre (IDRC)
- The Swedish International Development Cooperation Agency (Sida)
- WorldFish

Advisory Committee

The Advisory Committee advises the Director on priorities for research and training and recommends the annual program of work and budget to the Sponsors Group. The Committee consists of senior scholars and policymakers active in environmental management in Asia. Most of the Committee members are from Asia. Each member has a two-year term, renewable once for Asian members. The Committee meets once a year in conjunction with the EEPSEA Annual Conference. The Committee members are listed below.

- *Dr. Xu Jintao*, Beijing University, China
- *Dr. Vitoon Viriyasakultorn*, Mekong River Commission
- *Dr. Daigee Shaw*, Academia Sinica, Taiwan
- *Dr. Budy Resosudarmo*, Australian National University, Australia
- *Mr. Raman Letchumanan*, ASEAN Secretariat
- *Dr. David James*, Environmental Economist, Australia
- *Dr. Mohd Shahwahid Haji Othman*, Universiti Putra Malaysia
- *Dr. Maripaz Perez*, WorldFish (*ex-officio member*)

Resource Persons Group

The Resource Persons Group consists of the Program's international and regional experts pool. These experts are tapped by the Program as instructors and speakers during its various learning and knowledge events. The members of this pool of experts are listed below.

- *Dr. Wiktor Adamowicz*, University of Alberta, Canada
- *Dr. Theodore Horbulyk*, University of Calgary, Canada
- *Dr. David James*, Environmental Economist, Australia
- *Dr. Jack Knetsch*, Simon Fraser University, Canada
- *Dr. Benoit Laplante*, Simon Fraser University, Canada
- *Dr. Nancy Olewiler*, Simon Fraser University, Canada
- *Dr. Budy Resosudarmo*, Australian National University, Australia
- *Dr. Daigee Shaw*, Academia Sinica, Taiwan
- *Dr. Jeffrey Vincent*, Duke University, USA
- *Dr. Dale Whittington*, University of North Carolina at Chapel Hill, USA
- *Dr. Ma Zhong*, Renmin University, China
- *Dr. Shiqui Zhang*, Peking University, China

Appendix A. List of EEPSEA courses and events

No.	Event	Partner	Date and venue	No. of Pax	Country representation	% Female
REGIONAL TRAINING COURSES			SUB-TOTAL	154	AVERAGE	46%
1	Research News Writing Workshop	-	11 May 2014, Phuket, Thailand	14 researchers (by invitation)	Cambodia, China, Indonesia, Myanmar, Philippines, Thailand, Vietnam	50
2	Economics of Fishery Resources and Management	-	15-16 May 2014, Phuket, Thailand	19 researchers (by application)	Cambodia, China, Lao PDR, Myanmar, Philippines, Thailand, Vietnam	47
3	Experimental Method for Environmental and Resource Economics	-	5-8 Aug 2014, Penang, Malaysia	24 researchers (by invitation)	Cambodia, China, Indonesia, Lao PDR, Malaysia, Philippines, Thailand, Vietnam	50
4	Resource Mobilization for Research Funds	-	22-25 Sep 2014, Manila, Phils.	13 EEPSEA researchers (by invitation), 6 WorldFish staff & mgrs.	Cambodia, Malaysia, Myanmar, Philippines, Thailand, Vietnam	58
5	Economic Values, Compensation and the Environment	-	1-4 Dec 2014, Bali, Indonesia	25 justices (by invitation)	Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines	16
6	Valuing Regulating Ecosystem Services in Southeast Asia	-	5-8 Jan 2015, Kuala Lumpur, Malaysia	34 researcher (by application)	Cambodia, China, Indonesia, Malaysia, Philippines, Thailand, Vietnam	59
7	Modeling Damages from Climate Change	-	13-16 Jan 2015, Hanoi, Vietnam	25 researchers (by application)	Cambodia, China, Indonesia, Lao PDR, Malaysia, Philippines, Thailand, Vietnam	40
IN-COUNTRY EVENTS			SUB-TOTAL	256	AVERAGE	47%
1	Introductory Course on Environmental and Experimental Economics in the Philippines	Department of Economics, University of the Philippines Los Baños	1-11 Apr 2014, Los Baños, Phils.	21 researchers	Philippines	57
2	Environmental Economics Training for Lecturers and Researchers in Cambodia	Faculty of Development Studies, Royal University of Phnom Penh	8-12 Jul 2014, Sihanouk Ville, Cambodia	32 researchers	Cambodia	19
3	Policy Dialogue on Sustainable Lake Management: Pollution and Fishing Control Policies in Southern Songkhla Lake	Faculty of Economics, Prince of Songkla University	29 Jul 2014, Hatyai, Thailand	37 reps of government agencies, community leaders, university researchers	Thailand	51
4	Policy Dialogue on Priority Drinking Water Options and Arsenic Health at the Mekong Delta	School of Economics and Business, Cantho University	4 Sep 2014, Cantho, Vietnam	34 stakeholders	Vietnam, Cambodia	21

No.	Event	Partner	Date and venue	No. of Pax	Country representation	% Female
5	Short Course on Environmental Economics in Myanmar	Myanmar Co-operative University	6-10 Oct 2014, Yangon, Myanmar	31 researchers	Myanmar	94
6	Policy Dialogue on Green Economy in Vietnam	University of Economics Ho Chi Minh City	10 Feb 2015, Ho Chi Minh, Vietnam	40+	Vietnam	
7	Seminar on the Policy Alternative for Sustainable Sandy Beach Management and Conservation	Faculty of Economics, Prince of Songkla University	23 Jan 2015, Hatyai, Thailand	61	Thailand	39
REGIONAL PARTNERSHIP EVENTS			SUB-TOTAL	268 (558)	AVERAGE	34%
1	International Training Course on Biodiversity Valuation and Payment for Ecosystem Services	ECO-BEST, ASEAN Centre for Biodiversity	27 Sep - 1 Oct 2014, Khao Yai, Thailand	33: 12 park managers/staff; 12 Ministry of Environment reps; 9 univ. researchers	Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Thailand, Vietnam	35
2	2 nd International Conference on Agricultural and Rural Development in Southeast Asia	Southeast Asian Regional Center for Graduate Study and Research in Agriculture	12-13 Nov 2014, Manila, Phils.	4 (228)		25 (54)
3	EAAERE Inter-congress Conference	East Asian Association of Environmental and Resource Economics	8 Dec 2014, Jakarta, Indonesia	20 (86) researchers		25
4	International Conference on Conservation Financing in Southeast Asia	USAID-Biodiversity and Watersheds Improved for Stronger Economy and Ecosystem Resilience Project	3-4 Mar 2015, Manila, Phils.	141 (additional 58 registered webcast pax)	Philippines, Indonesia, Thailand, Lao PDR, Myanmar, Vietnam, Malaysia, Cambodia, USA, Germany	50
4	Policy Dialogue on Green Economy in Southeast Asia	University of Economics Ho Chi Minh City	6 Mar 2015, Ho Chi Minh, Vietnam	70 policymakers and researchers	Vietnam, Laos, Thailand, Indonesia, Malaysia, Myanmar, Philippines, and Taiwan	
			TOTAL	678 (968)	AVERAGE	42%

NOTE: Figures in parenthesis indicate the complete number of event participants, including those not directly supported by EEPSEA but also benefited from the sessions wherein EEPSEA served as convenor/speaker.

Appendix B. List of new courses and degree programs developed

Course/Degree	University Unit
Graduate Course Developed	
Environmental Valuation	School of Development Economics, National Institute of Development Administration, Thailand
Environmental and Resource Economics	University of Southern Mindanao, Philippines
Globalization and Environmental Economics	Nanjing University, China
Forest Resource Valuation and Accounting	University Putra Malaysia, Malaysia
Advanced Environmental Economics	University of Economics, Ho Chi Minh City, Vietnam
Economics of Climate Change (for Master of Agricultural Economics)	Cantho University, Vietnam
Undergraduate Course Developed	
Natural Resources Economics	Vietnam Forestry University, Vietnam
Special Topics: Behavioral and Experimental Economics	Department of Economics, University of the Philippines Los Baños, Philippines
The Environmental and Natural Resource Economics: A Case Study of Songkla	Faculty of Economics, Prince of Songkla University, Thailand
Forest Economics	Universiti Putra Malaysia, Malaysia
Economics of Climate Change (for BS Natural Resource and Environmental Economics and BS Agricultural Economics)	Cantho University, Vietnam
Degree Program Developed or Proposed	
International Master Program in Marine Ecosystem Management and Climate Change	Nha Trang University, Vietnam
MS in Applied Economics	Faculty of Economics, Prince of Songkla University, Thailand

Appendix C. List of research grantees by type of grant

Researcher/Grantee	Research Project Title
Competitive Research Grants	
1. Mr. Kong Sopheak, <i>Cambodia</i>	An Estimation of Production Function for Fisheries in Peam Krasoab Wildlife Sanctuary in Koh Kong Province, Cambodia
2. Ms. Junxiu Sun, <i>China</i>	The Economic and Environmental Impact of the Green Credit Policy in China (<i>dissertation</i>)
3. Ms. Yana Jin, <i>China</i>	Cost-Benefit Analysis of Phasing Out Coal for Various Uses: An Empirical Study for “Jing-Jin-Ji” Region, China
4. Mr. Zanxin Wang, <i>China</i>	How Sustainable is Solar Energy? An Estimation of the External Cost of Silicon Production in Nujiang, China
5. Mr. Zhen Zhu, <i>China</i>	The Supply of Forest Carbon Sequestration from Small-scale Forestry: Time Preference and Attitude to Risk
6. Mr. Fujin Yi, <i>China</i>	Surface Ozone Pollution and Unrecognized Challenge for Food Security: Evidence from China
7. Ms. Alin Halimatussadiah, <i>Indonesia</i>	The Role of Social Capital and Leadership in the Success of the Waste Bank Program in Depok Municipality, West Java
8. Ms. Ekaningrum Damastuti, <i>Indonesia</i>	Assessing the Effectiveness of Community-based Mangrove Management to Combine Sustainable Resource Use, Biodiversity Conservation and Coastal Protection: A Case Study in Demak, Indonesia (<i>dissertation</i>)
9. Ms. Khairunnisa Ahmad Kamil, <i>Malaysia</i>	Economic Valuation of Pulau Sembilan and Surrounding Areas: Direct Market Value and Random Utility Modelling of Site-choice Behavior (<i>dissertation</i>)
10. Ms. Alice Ferrer, <i>Philippines</i>	Economic, Social, and Distributional Aspects of Mariculture Parks in the Philippines
11. Ms. Suparee Boonmanunt, <i>Thailand</i>	Patience and Conservation: Individual and Group Inter-temporal Decisions in Thai Communities (<i>dissertation</i>)
12. Ms. Pham Thi Thanh Thuy, <i>Vietnam</i>	Ecotourism: Good for Biodiversity Conservation and Community Economic Well-being? An Analysis of Nha Trang Bay Marine Protected Area in Viet Nam
13. Mr. Thang Dang, <i>Vietnam</i>	The Economic Value of Ecosystem Services and Natural Capital in Southeast Asia
14. Mr. Trinh Quang Tu, <i>Vietnam</i>	Risk Perception and Risk Attitude towards Climate Change and Shrimp Farmers’ Adaptation in Mekong Delta, Vietnam (<i>dissertation</i>)
15. Mr. Nguyen Viet Cuong	Do Hygienic Latrines Improve Health and Health Knowledge? A Randomised Control Trial Study in Vietnam
16. Mr. Nguyen Viet Cuong	The Impact of Climate Change on Health and Sanitation: Comparative Evidence from Cambodia, Laos and Vietnam
17. Mr. Vo Thanh Danh	Drinking Water Options In The Context Of Arsenic Contamination At The Vietnamese Mekong Delta
18. Ms. Le Ha Thanh	A study on households’ perception on arsenic contaminated water and willingness to pay for piped water connection in arsenic contaminated areas of Red River Delta, Vietnam

Researcher/Grantee	Research Project Title
Small Research Grants	
1. Mr. Cheb Heourn, <i>Cambodia</i>	Can Ecotourism Reduce Pressures of People on Biodiversity in Virachey National Park, Cambodia?
2. Mr. Outhai Soukkhy, <i>Lao PDR</i>	Exposure to Herbicides in Maize Production in Northern Laos
3. Ms. Shwe Mar Than, <i>Myanmar</i>	Adoption Constraints for Soil Conservation Practices in the Myanmar Dry Zone Regions of Kyaukpadaung and Chaung U Townships
4. Ms. May Lin Aung, <i>Myanmar</i>	The Impact of Pesticides Used in Agriculture on Human Health: A Case Study of the Western Part, Thongwa Township, Myanmar
5. Ms. Kay Khine Nyein, <i>Myanmar</i>	Willingness to Pay for Protecting Birds from Moeyungyi Wetland Bird Sanctuary
6. Ms. Tin Tin Wai, <i>Myanmar</i>	Economic Dependency of Local Communities on Mangrove Resources and their Role in Mangrove Conservation: A Case Study in Bogalay Area, Ayeyarwady Region, Myanmar
7. Ms. Lae Mon Thein, <i>Myanmar</i>	Assessment of Health Impacts from Water Pollution in Hlaing Tharyar Industrial Zone: A Case Study on the Yay Oakkan Village Group
8. Ms. Asuncion De Guzman, <i>Philippines</i>	Economics of Reef Gleaning: Impacts on the Coastal Environment, Household Economy and Nutrition in Selected Sites in the Philippines
9. Ms. Tran Huynh Bao Chau, <i>Vietnam</i>	Impact of Vietgap Program in Vegetables Production on Health Attributes of Farmers in Thua Thien Hue Province, Vietnam
10. Ms. Nguyen Thi Thiem, <i>Vietnam</i>	Environmental and Economic Evaluation of Alternative Land Use Conversions: A Case Study of Palm Forest Conversion in Thanh Ba District, Phu Tho Province, Vietnam

Appendix D. List of conferences and policy forums wherein EEPSEA-funded research were presented

	EEPSEA Research	Events	Date & Venue
1	Cost-benefit analysis of sustainability standards in smallholder oil palm farming in Sumatra, Indonesia <i>by Ernah (Indonesia)</i>	International Conference on Research on Food Security, Natural Resources Management and Rural Development (Tropentag)	17-19 Sep 2014, Czech University of Life Sciences, Prague, Czech Republic
		International Conference on Indonesian Society of Agricultural Economics	28-29 Aug 2014, Bogor, Indonesia
2	Estimation of flood river damage in Jakarta <i>by Pini Wijayanti (Indonesia)</i>	Jakarta Climate Adaptation Tools (JCAT): The pathway towards its resiliency	21 Aug 2014, Jakarta, Indonesia
		Jakarta Annual Research Workshop	29 Aug 2014, Jakarta, Indonesia
		Rotterdam International Conference 2014: Deltas in Times Climate Change II	24-26 Sep 2014, Rotterdam, the Netherlands
3	Altruism, cooperation, and trust: Other-Regarding behavior and collective actions in Thailand <i>by Rawadee Jarungrattanapong (Thailand)</i>	4 th Congress of the East Asia Association of Environmental and Resource Economics	12-14 Feb 2014, Busan, Korea
		World Conference of Environmental and Resource Economists (WCERE)	28 Jun - 2 Jul 2014, Istanbul, Turkey
4	Household demand for improved drinking water quality: A cross-country project <i>by Phumsith Mahasuweerachai (Thailand)</i>	4 th Congress of the East Asian Association of Environmental and Resource Economics	12-14 Feb 2014 Busan, Korea
5	Where can payment/rewards for ecosystem services tip the rubber monoculture to rainforest recovery in Xishuangbanna, China? <i>by Zhuangfang Yi (China)</i>	World Congress on Agroforestry	10-14 Feb 2014, Delhi, India
		Workshop on Environmentally and Socially Responsible Global Trade Timber and Tree Crop Commodities	Nov 2014, University of Wageningen, the Netherlands
6	The role of social capital and leadership in the success of the waste bank program in Depok Municipality, West Java <i>by Alin Halimatussadiah (Indonesia)</i>	12th Indonesian Regional Science Association Conference	2-3 Jun 2014, Makassar, Indonesia
		2 nd Asia Engage Regional Conference	17-20 Nov 2014, Bali, Indonesia
		2014 EAAERE Inter-Congress Conference	8 Dec 2014, Jakarta, Indonesia
7	The supply of forest carbon sequestration from small-scale forestry: Time preference and attitude to risk <i>by Zhen Zhu (China)</i>	China Forest Economics Forum	Sep 2014, China

Appendix E. EEPSEA research published this year

2014-SRG1

Old Livelihoods under New Climate: Assessing Potential Adaptation Strategies in Gubat, Sorsogon and Labo, Camarines Norte, Philippines by Maria Victoria O. Espaldon, Zenaida M. Sumalde, Lynie B. Dimasuay, Jaimie Kim Bayani Arias, André E. Quiray, Jesamine F. Rebugio (August 2014)



This study assessed the local climate change adaptation strategies used in two Philippine municipalities: Labo, Camarines Sur and Gubat, Sorsogon. Results indicate that, in nominal terms, the total value of damage due to the most recent disaster experienced by the Labo households at the time of the study amounted to PhP 2.38 million, more than half of which is due to damage to productivity (mainly crop production and raising livestock and poultry). On the other hand, in nominal terms, the total value of damage due to the recent disaster experienced by the Gubat respondents at the time of the study amounted to PhP 1.16 million. More than half of the value was due to damage to properties, particularly houses and household appliances.

2014-SRG2

Adaptation and Coping Strategies to Extreme Climate Conditions: Impact of Typhoon Frank in Selected Sites in Iloilo, Philippines by Rodelio F. Subade, Jee Grace B. Suyu, Jorge S. Ebay, Emeliza C. Lozada, Jessica A. Dator-Bercilla, Andres C. Tionko, Farisal U. Bagsit, Josefa T. Basco (September 2014)



This study aimed to understand the immediate and long-term measures adopted by Iloilo households and communities to adapt to and cope with the impacts of extreme climate-induced events, particularly typhoon and flooding. The research areas include six *barangays* along the Magapa-Suage River and Jalaur River systems that were heavily affected by Typhoon Frank. Results indicate that the average losses amounted close to PhP 13,500/ household, roughly 17% of household annual income. The experience with Typhoon Frank showed that a combination of infrastructural, economic, and social strategies are needed for communities to better adapt to and cope with potential impacts of extreme weather events.

2014-SRG3

An Analysis of the Recreational Use Value of Apo Island, Philippines by Wilma M. Tejero (September 2014)



Apo Island is one of the world's best known successful community-organized marine protected sanctuaries. However, increasing population and tourism-related activities in the island have resulted to environmental problems. This study aimed to estimate the recreational value of Apo Island. Using the travel cost method, the consumer surplus or the net economic benefit derived from visiting Apo Island for its recreational services was estimated. It is apparent from this analysis that the government, through the Apo Island Protected Landscape and Seascape, can justify a higher budget for environmental conservation, livelihood and other social services program. An increase in the entrance fee (100%) of foreign tourists who visit Apo Island for the island's environmental and recreational services is suggested.

2015-RR1

Eliminating the Fuel Subsidy in Indonesia: A Behavioral Approach by Rimawan Pradiptyo, Gumilang Aryo Sahadewo (February 2015)



This study uses behavioral insights and a computer-based survey to determine the most acceptable exit strategy for eliminating the fuel subsidy scheme in Indonesia. During the survey, subjects were given several pair-wise choices and were asked to choose which strategy they deemed to be more acceptable. The results of the survey show that a combination of gradual elimination and a scheme that reallocates money, particularly money earmarked for vaccinations for children and investment in mass rapid transportation (MRT), were considered to be most desirable. Unsurprisingly, immediate elimination and a broad reallocation scheme was the least favored choice among survey respondents.

2015-RR2

Mediation Analysis of Factors that Influence Private Flood Mitigation Behavior in Developing Countries: Evidence from the Mekong Delta, Vietnam

by Phung Thanh Binh, Xueqin Zhu, Rolf Groeneveld and Ekko van Ierland (February 2015)



This study used the Protection Motivation Theory and mediation analysis to investigate mitigation behavior in response to flood hazards. A household survey and a flood-risk communication experiment with 480 households in selected flood-prone areas in Vietnam's Mekong Delta were conducted. The results indicated that self-efficacy (i.e., one's ability to take actions that will reduce flood risks) and response efficacy (i.e., the effectiveness of the action to be undertaken) were consistently good predictors of flood mitigation behavior and important mediators in the relationships between mitigation behavior and its individual determinants. Vicarious experiences from flood-risk training programs and focus group discussions increased people's motivation to undertake protective action.

2015-RR3

Estimation of River Flood Damage in Jakarta: The Case of Pesanggrahan River

by Pini Wijayanti, Tono, Hastuti, Danang Pramudita (February 2015)



This research estimated the damage caused by river flooding in the Pesanggrahan River in Jakarta. It focused on direct damage to the residential and business sectors. Findings show that during the three-day flood from 17-19 January 2013, damage in the residential sector amounted to USD 308/household and USD 0.5 million in total. In the business sector, damage was USD 837/business unit and USD 0.7 million in total. By making a monetary assessment of women's roles in relation to the three phases of flooding (before, during, and after), the individual benefit provided by each woman was estimated to be about USD 26 for families and USD 30 for society.

2015-RR4

Economic Valuation of Health Impacts of Haze Pollution in Malaysia

by Jamal Othman, Mazrura Sahani, Mastura Mahmud, Md Khadzir Sheikh Ahmad (February 2015)



This study assessed the value of the health impacts (inpatient cases) caused by smoke haze pollution in Kuala Lumpur and adjacent areas in Selangor state. It found that the health (inpatient cases) impact of the smoke haze in the study area was worth at least MYR 273,000 (USD 91,000). It also shows that the haze places significant demands on hospital resources. In light of these findings, the study concludes that the national health costs of haze are significant and recommends that action should be taken by governments across the region to impose substantial disincentives on local and foreign firms caught contributing to the haze.

2015-RR5

Consumer Willingness to Pay for Eco Labels in China *by Haitao Yin and Rui Zhao (March 2015)*



To help make eco-labels in China more effective, this study surveyed key organisations involved in their development and has also assessed public attitudes to the idea. It finds that consumers are willing to pay more for products with eco-labels and that the idea should be pursued. It concludes that, in China, the use of eco-labels could be a useful environmental instrument but that many hurdles need to be overcome before their full potential is reached. It therefore suggests policies that might be put in place to move the approach forward.

2015-RR6

Biofuel Production in Vietnam: Cost Effectiveness, Energy and GHG Balances

by Loan T. Le (March 2015)

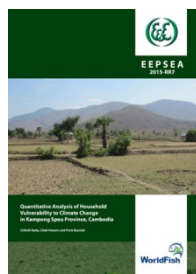


This study looked at the energy efficiency, GHG emissions and cost-effectiveness of using biofuel as an energy source for transportation. It shows that energy efficiency and GHG emissions savings can be made by substituting ethanol for gasoline (in a blend of the two fuels) and by substituting biodiesel for diesel (again in a blend of the two fuels). Biodiesel has additional environmental benefits in that its main raw material can be grown on marginal degraded land. However, in comparison with biodiesel, the production and use of bio-ethanol has advantages in terms of its cost-effectiveness and energy efficiency. The study underlines the potential that biofuels have in Vietnam. Its results are relevant to the development of sustainable biofuel usage in Vietnam, and to the development of biofuels elsewhere in Southeast Asia.

2015-RR7

Quantitative Analysis of Household Vulnerability to Climate Change in Kampong Speu Province, Cambodia

by Chhinh Nyda, Cheb Hoeurn, and Poch Bunnak (March 2015)



This study focused on measuring household vulnerability to climate change in six communes in Kampong Speu Province and identifying locally appropriate options and relevant policy interventions. Vulnerability was measured in terms of a Vulnerability Index (derived from exposure, sensitivity, and adaptive capacity indices) and Vulnerability as Expected Poverty (VEP). In terms of exposure, the results showed that from 2008-2010, the communes under study had been severely hit by drought, the biggest threat to agriculture. Floods and windstorms had lesser but differing effects over different communes. The study found that households in Kampong Speu had low exposure, average sensitivity, and low adaptive capacity. About 67% of the sample showed medium to very high vulnerability.

2015-RR8

Using Reservoirs to Adapt to Drought in Agriculture: A Cost-Benefit Analysis from Cambodia

by Chhinh Nyda, Cheb Hoeurn, Chea Bora, and Heng Naret (March 2015)

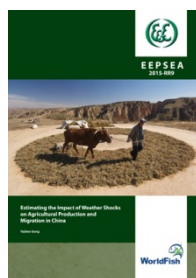


This study estimated the costs of drought at the household level in the rural communes of Kampong Speu Province and assessed the costs and benefits of restoring a water reservoir as an adaptation option to deal with drought. Data were collected from households for two rice ecosystems: totally rain-fed and with supplementary irrigation. It was found that the expected loss from drought in a rain-fed farm was USD 53.47/hectare compared to USD 23.01/hectare for an irrigated farm. At a 6% discount rate, the repair of the reservoir will yield a net present value of about USD 914,835 with a benefit-cost ratio of 2.18. If the reservoir is restored, it will increase rice production and stabilize food security in the area. Agricultural diversification, especially fish raising, animal raising, and vegetable planting, will become more viable for farmers.

2015-RR9

Estimating the Impact of Weather Shocks on Agricultural Production and Migration in China

by Yazhen Gong (March 2015)

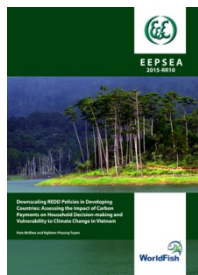


This research used a unique panel data set to explore the impact of fluctuations in weather conditions on rural-urban migration in China. It was found that weather shocks may have indirectly affected past rural-urban migration in China, most probably through their effect on crop yields. However, to identify the relationship between weather shocks and migration in future research, more attention must be given to finding appropriate estimation methods and proper measures for agricultural production and household migration decisions. Moreover, it may be critical to pay closer attention to extreme weather conditions, particularly extreme temperatures, instead of mean temperature/precipitation in growing seasons, when studying the effect of weather shocks on crop yields.

2015-RR10

Downscaling REDD Policies in Developing Countries: Assessing the Impact of Carbon Payments on Household Decision Making and Vulnerability to Climate Change in Vietnam

by Pam McElwee, Tuyen Nghiem, Hue Le, Huong Vu (March 2015)



This report presents findings from a field study in an early REDD development site, Vietnam, to test several important questions about local forest governance and REDD. The research project, conducted in three provinces, included qualitative and quantitative methods to collect data. Among the objectives of the study is to determine ways in which payments for forest protection might alter smallholder households' land use decision making, especially those who use forests for supplementary food production and income diversification. It was found that changes in forest use, precipitated by forest protection payments, have been not significant so far, because existing forest payments have lacked conditionality. Not enough attention has been paid to the poverty and social aspects of REDD implementation, and the potential risks that might be incurred when poor people are induced to make land use changes in response to carbon markets. Hence, these issues need attention as REDD is being developed.

Appendix F. EEPSEA website use statistics

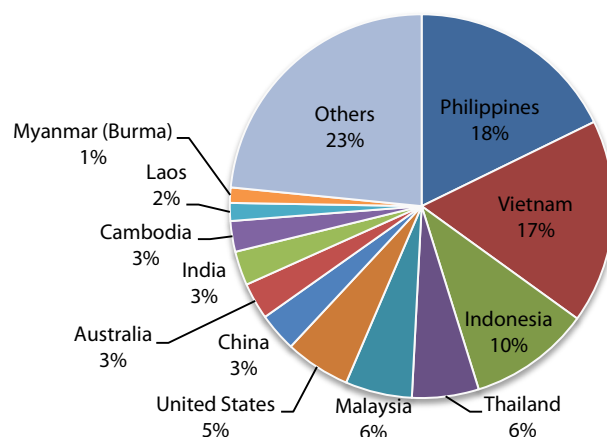


Figure 1. Percent distribution of unique website visits per country

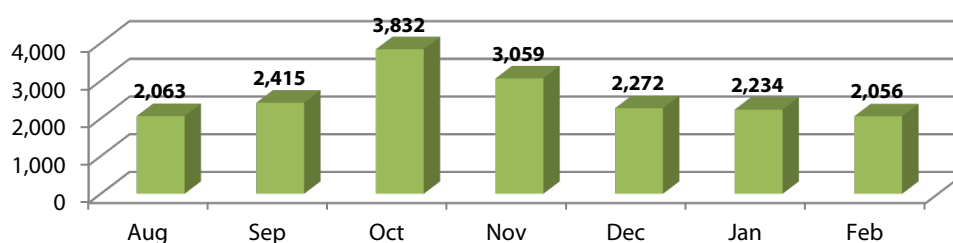


Figure 2. Number of website visits per month

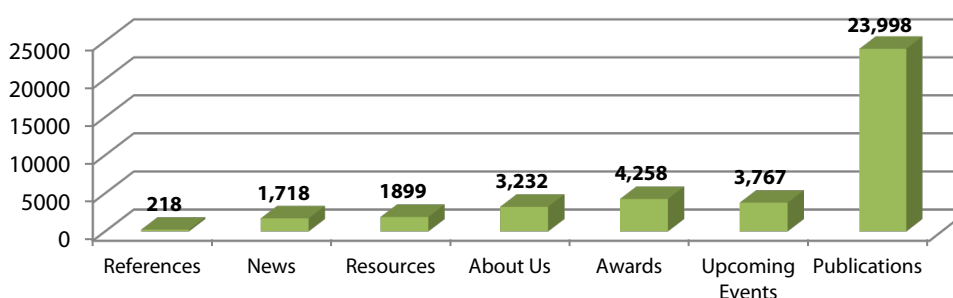


Figure 3. Number of visits per webpage category

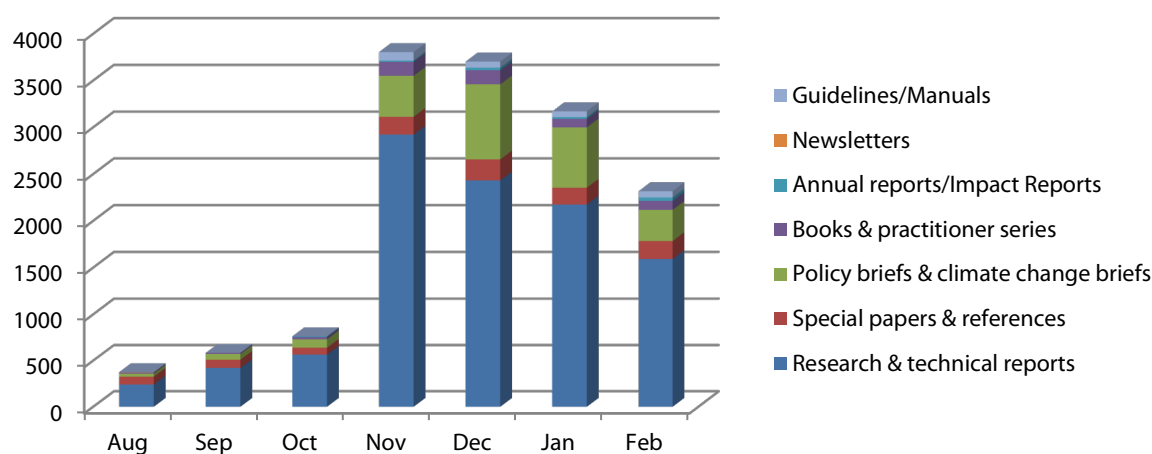


Figure 4. EEPSEA website downloads per type

Strengthening local capacity in the economic analysis of environmental issues

EEPSEA is administered by WorldFish on behalf of its sponsors, Sida and IDRC.

