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ECONOMY AND ENVIRONMENT PROGRAM  
FOR SOUTHEAST ASIA

**EVALUATION OF THE  
ECONOMY AND ENVIRONMENT PROGRAM  
FOR SE ASIA (EEPSEA)**

**Daniel Bromley and Gelia Castillo  
February 2000**

EEPSEA is supported by a consortium of donors and administered by IDRC.  
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FOR SOUTHEAST ASIA

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## FOREWORD

This document contains the report and supporting documents for a comprehensive evaluation of the Economy and Environment Program for Southeast Asia (EEPSEA). The evaluation was carried out on behalf of the Sponsors Group by Dr. Daniel Bromley and Dr. Gelia Castillo between July 1999 and January 2000. It is the second external evaluation to be performed since EEPSEA was established in 1993 and covers the period from November 1996 to November 1999.

### What is EEPSEA?

The Economy and Environment Program for Southeast Asia was established in May 1993 to support training and research in environmental and resource economics. Its goal is to strengthen local capacity for the economic analysis of environmental problems so that researchers can provide sound advice to policymakers. The program uses a networking approach to provide not only financial support but meetings, resource persons, access to literature, publication outlets, and opportunities for comparative research across its ten member countries. These are Thailand, Malaysia, Indonesia, the Philippines, Vietnam, Cambodia, Laos, China, Papua New Guinea and Sri Lanka.

EEPSEA's structure consists of a Sponsors Group, comprising all donors contributing at least USD 100,000 per year; an Advisory Committee of senior scholars and policy makers; and a small Secretariat (2.6 person years) in Singapore and the Philippines. EEPSEA is a project administered by the International Development Research Centre of Canada (IDRC) on behalf of the Sponsors Group.

Typically, researchers learn about EEPSEA by various means and apply for a research or training award. Most applicants attend one of EEPSEA's courses before or in conjunction with their research project. Budget ceilings for research projects are USD 15,000-22,000, depending on the country, exclusive of a small honorarium. Researchers may be affiliated with a university, government or non-government organization and grants are normally made to that institution. Teams of researchers carry out most projects. Proposals and approved projects are subject to intensive review and presentation in twice-yearly workshops and researchers receive frequent technical assistance and literature from the Secretariat and resource persons. Final reports from successful projects are widely disseminated in EEPSEA's publication series. To date, EEPSEA has provided training to some 180 people and supported about 75 research projects.

## Previous Evaluations

a) In 1996, EEPSEA was evaluated on behalf of the Sponsors Group by Dr. Mohan Munasinghe, former Chief of the Environment Division at the World Bank. Some of the main findings:

- \* The program "...met or exceeded most of the evaluation criteria..."
- \* The special programs for Indochina are necessary and well-conceived.
- \* The participation rate of women is "remarkably high" (more than 50%).

The main recommendations were:

- \* to devote more attention to economy-wide and institutional issues in the research program
- \* to establish a regional short course to replace reliance on overseas short courses.

b) In 1998, IDRC commissioned a team of consultants to assess the effectiveness of several multi-donor projects, including EEPSEA (Jim Armstrong & Anne Whyte, Learning Partnerships: A Review of IDRC Secretariats). The overall finding:

"There is little doubt that, by any measure, EEPSEA is one of the more successful [multi-donor projects] housed at IDRC. Lessons drawn from this case focus on elements of success that are transferable":

- \* a well-established organizational structure, including clear roles for the Advisory Committee and Sponsors Group
- \* a high level of dedication, scientific leadership, and ability to work with others through networking
- \* a strong, focussed mission.

## The 2000 Evaluation

The 2000 Evaluation was initiated by the Sponsors Group as part of EEPSEA's regular evaluation cycle. It is a comprehensive evaluation with broad terms of reference. In addition to the normal assessment of overall quality, the Sponsors highlighted two issues for this exercise:

- \* After six years of operation, it is important to assess not only goals and procedures, but also initial impacts. The evaluation thus devotes particular attention to human resource development and policy impact, and means by which such impact could be documented and increased.

\* The countries in this region are extremely diverse with respect to income levels, population and research capacity. Partly to accommodate such diversity, EEPSEA has supplemented its predominantly regional approach with a program of in-country activities designed to “deepen environmental economics”. These are intended to provide training and research opportunities for lower capacity countries; enhance dissemination and policy dialogue; and encourage local ownership and sustainability. But it takes considerable effort to organize such activities; EEPSEA does not have the staff or resources to simply add ten in-country programs to the current regional program. The extent to which such outreach should be pursued and the means by which it could be managed were therefore a second focus of this exercise.

A team of two consultants carried out the evaluation. While both offer wide ranging comments, Daniel Bromley was primarily responsible for assessing the overall quality of EEPSEA’s work while Gelia Castillo devoted more attention to the two issues highlighted above.

**Dr. Daniel Bromley** is widely acknowledged to be one of the senior figures in the field of environmental economics. He is Anderson-Bascom Professor of Applied Economics at University of Wisconsin-Madison and has been Editor of Land Economics since 1974. He has evaluated research programs and development projects on behalf of USAID and the US Department of Agriculture, among others.

**Dr. Gelia Castillo**, a rural sociologist by training, has served on the Boards of IDRC, CIP-ICRAF, ISNAR, IPGRI, the Philippine Institute for Development Studies, the Philippine Rice Research Institute and several others. She has participated in more than a dozen reviews of research programs, including those of WHO, IRRI, ACIAR, the CGIAR (System-wide Review: Sub-panel on Science and Strategy), the International Foundation for Science, and others. In October 1999 she was conferred the title of National Scientist by the President of the Philippines.

#### **The Terms of Reference for Dr. Bromley were:**

To undertake an evaluation of EEPSEA’s principal activities from November 1996 to November 1999, with particular attention to:

- \* Quality of the research output
- \* Process: Has the “project cycle” of meetings and technical assistance been effective in developing research skills?
- \* Training: Aside from capacity building through the research project cycle, what is the quality of the Los Baños training course?

- \* Dissemination: Are research outputs disseminated in a suitable form and to an appropriate audience?
- \* Follow-up: Have the recommendations of the 1996 evaluation been implemented?
- \* Impact: Is the program having appreciable impact on environmental awareness, public discussion and policy-making in the region?

The evaluator's report may also include recommendations for actions to improve the quality or impact of EEPSEA's program.

#### **The Terms of Reference for Dr. Castillo were:**

To assess the appropriateness of EEPSEA's modus operandi in promoting the utilization of research results and to suggest ways in which utilization and policy impact might be further enhanced. This could involve, but is not restricted to:

- \* Assessing the results of EEPSEA's August 1999 tracer study of recipients
- \* Assessing the range of activities proposed in EEPSEA's Program of Work
- \* Identifying areas of specialization or comparative advantage for EEPSEA
- \* Recommending new activities
- \* Identifying new audiences or partners for EEPSEA's work
- \* Identifying activities or audiences where EEPSEA should not be active because of inadequate resources, comparative advantage or other reasons.
- \* Defining reasonable expectations and indicators for impact over the next 5 years.

#### **Information Sources**

The consultants' assessment was based on the following sources:

- \* The EEPSEA Five-Year Report, 1993-98
- \* Annual Report. 1998/99 and Program of Work, 1999/2000
- \* The 1996 and 1998 evaluations cited above
- \* Results of two 1999 surveys of EEPSEA members and associates. The first asked respondents to assess the quality of the services provided by EEPSEA and the outputs produced. The second (a "tracer study") asked all recipients of EEPSEA training or research awards since 1993 to identify the contribution of EEPSEA support to their professional development and to policy impact.
- \* Results of surveys of those attending the regional course in Los Banos, 1997-99
- \* The Los Banos course outline

- \* EEPSEA's list of publications: Research Reports, Special Papers & Policy Briefs
- \* Copies of Research Reports, along with the publications mailing list
- \* EEPSEA Website
- \* The evaluators' observations and observations at the November 1999 biannual workshop.

In addition, Dr. Castillo drew on observations of the 1999 Los Banos course and a field trip to an EEPSEA project in Vietnam. Dr. Bromley also drew on his observations at the May 1997 biannual workshop, which he attended as an invited speaker.

### **Structure of the Report**

The report consists of:

- \* An Executive Summary of the overall report, prepared by the consultants and reflecting both their findings
- \* The reports by Dr. Bromley and Dr. Castillo
- \* An Annex containing survey results.

David Glover, Director  
February 2000

## PREFACE

This evaluation is based upon a variety of information provided to us by EEPSEA. We also participated in the November 1999 Singapore Workshop where we were able to observe the full gamut of workshop activities - mentoring interactions between research advisors and EEPSEA researchers, presentation and refinement of research proposals in small group settings, plenary speakers, special workshop for Southeast Asian journalists, and the very valuable "networking" that occurred among all participants. We also observed the meeting of the EEPSEA Advisory Committee. Following the Singapore Workshop we prepared our respective reports and the senior author then prepared a unified Executive Summary - allowing the two separate reports to stand on their own.

The report is divided into two parts reflecting the division of labor in our assignment, and our own expertise. An Annex contains supporting material. We have benefited from the excellent work and cooperation of David Glover, Hermi Francisco, and Cathy Ndiaye.

Program evaluations are, by definition, a balancing act between praise and criticism. The praise, if too effusive, may suggest to the reader that the reviewers have been somehow manipulated and "co-opted." The criticism, if appearing excessive, may blind the reader to the many impressive successes. The difficulty comes in judging when the praise is "too effusive" and when the criticism is "excessive."

Our approach here is to assert that there is so much about EEPSEA that is profoundly good that we believe we can say it once here, and then turn to the criticism. But let us be clear that the criticism here advanced is of a fine-tuning variety, and it often reflects issues of which EEPSEA leaders are well aware. Our overall assessment, reflected in the questionnaires and surveys, is that EEPSEA is doing a great deal of things very well. What appears as "criticism" must be understood as suggestions to keep an excellent program alert to the need for refinement and evolution as conditions and circumstances change.

Daniel W. Bromley



## EXECUTIVE SUMMARY

1. EEPSEA, in its short existence, has established itself as an exemplar in producing first-rate policy relevant research on environmental economics. Of greater importance, EEPSEA is developing a cohort of well-trained environmental economists in Southeast Asia who will continue to provide substantive policy input into the resolution of serious environmental problems.
2. There is a very high degree of satisfaction with EEPSEA among those with whom it has collaborated over the past six years.
3. The impacts of EEPSEA—in addition to research products and policy input—must be seen in terms of the development of human capital in the region.
4. Current research products (research reports, policy briefs, special papers) are excellent but researchers should be expected to interact more frequently with the media to explain their research topic and results.
5. Consideration should be given to renewed emphasis on identification and dissemination of priority research themes of particular interest for EEPSEA research support.
6. The EEPSEA research strategy should consider theme-oriented small group workshops on a range of environmental topics.
7. Research emphasis should be devoted to explanations concerning why environmental degradation persists in the region, and how such outcomes might be mitigated.
8. EEPSEA should initiate a pre-proposal phase in which applicants develop the environmental problem to be addressed, its presumed causes, and how the research results will be used to influence public policy. Once these pre-proposals have been reviewed they can then be elaborated in terms of approach and methods.
9. Research advisors should be brought into the process of project formulation earlier than has sometimes been the case. In addition, research advisors should maintain more frequent contact with their advisees. Steps might be initiated to make sure that researchers are reminded—frequently—of the value of on-going communication.

10. The training course at Los Baños should be evaluated to see if changes in its frequency, structure, and scope might enhance educational outcomes.
11. The bi-annual workshop in Singapore remains an essential component of the program but minor adjustments in program structure and composition should be considered.
12. Environmental experts in Southeast Asia should be brought into the EEPSEA program as expert speakers, research advisors, and consultants.
13. EEPSEA should seek to collaborate with environmental organizations in Southeast Asia.
14. Graduates of the EEPSEA program in various countries in the region should be incorporated into future activities as Senior Research Associates. These individuals could be valuable to the devolution of EEPSEA activities throughout the region.
15. Administrative support in EEPSEA is excellent on all accounts as demonstrated by responses to the surveys. These results appear in Annex I. However, if EEPSEA is to evolve into a sustainable program throughout the region, and if it is to undertake some of the initiatives discussed here, staff support must be augmented.

# **PART I**

**DANIEL W. BROMLEY**

## FINDINGS

### 1. The Project Cycle

The first issue to be raised concerns what I shall call the project cycle. Here I will address issues that plague all young researchers—a preoccupation with research methods. It is my impression that some research proposals are submitted to EEPSEA with an undue emphasis on methods, and with great weight given to activities that will mimic the sophisticated models gleaned from articles in prestigious academic journals. Unfortunately, data are rarely available to do the necessary work implied by this research strategy. Indeed, for many of the approaches, data are not even available in North America or Europe where the bulk of the more advanced literature is produced.

This outcome, prevalent among novice researchers, suggests that EEPSEA staff and research advisors must remain ever alert to the need to focus attention on the difficult task of problem definition. The EEPSEA publication “How to Prepare a Research Proposal in Environmental Economics” is quite clear about this important matter. But young researchers will require constant reminders that unless a particular research problem is correctly defined, there cannot possibly be hope for a coherent research product. Indeed the most common problem among novice researchers is to define their research “problem” in terms of the method they wish to use in their subsequent work. Pollution problems can quickly become recast as optimal effluent taxation problems in order to demonstrate the salutary efficiency properties of such taxes vis-à-vis so-called “command-and-control” approaches.<sup>1</sup> Concern for endangered species can quickly become transformed into valuation studies to ascertain whether or not it is “worth it” to preserve nature against the onslaught of development. These methodological distortions of environmental problems render it more difficult to produce research products that speak to policy makers.<sup>2</sup>

Perhaps EEPSEA staff and research advisors might find greater success in this struggle if the research proposal process were restructured somewhat. I would recommend that EEPSEA initiate a pre-proposal phase in which the applicant develops two ideas: (1) the environmental problem to be addressed (and its presumed causes); and (2) how the research results will be used to

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<sup>1</sup> The distinction that ought to be drawn is between price-based policies as opposed to quantity-based policies. It is an overstatement to allege that environmental protection agencies in a market democracy either “command” or “control” anything. This traditional linguistic convention serves only to buttress the rhetorical power of so-called “market-based instruments” among those who might otherwise be irresolute in their commitment to markets and market processes.

<sup>2</sup> I comment further on this problem below.

influence public policy.<sup>3</sup> I would suggest that this pre-proposal be limited to 2,500 words.

Once the EEPSEA staff and its network of advisors and consultants have reviewed the pre-proposals, and sent needed modifications to the applicants, it would then be appropriate for the applicant to develop in greater detail the various research methods that might be brought to bear on the “problem on the ground.” It is here that the existing literature can be essential. But, as above, great care must be taken to assure that the approach will allow the researcher to produce meaningful empirical content so that the research product is pertinent to the policy process.

This structural change will allow EEPSEA to avoid several problems that now seem worthy of rectification. First, it will tend to diminish the current tendency of applicants to fetishize certain research tools recently on display in scholarly journals. As mentioned previously, it is rare that there are adequate data for many of these methods and that paucity is magnified in Southeast Asia. The second problem that could be avoided is that the current system produces a tendency for applicants to become emotionally invested in some of these fancy methods and they then subsequently resist their research advisor’s best efforts to bring their work down to a more practical level. This emotional commitment is fueled by the natural expectation that if they too could but conduct a study such as the one they seek to mimic then they too could get it published in a fancy journal. Finally, it hardly needs emphasis that many of these state-of-the-art journal papers serving as inspiration for young researchers suffer from a lack of policy relevance. Recall that the purpose of top-tier journals (the only ones “worth” publishing in to an aspiring academic) is not to transform economic policy but to advance the state-of-the-art in economics. This is a good and noble role—but it is not always an approach conducive to speaking truth to power on environmental matters.

## **2. Research Advisors**

The research advisors constitute the key to the success of proposals and research projects. There appears to be some variability in the extent to which advisors and researchers stay in frequent contact. If this is the case, EEPSEA’s research program would benefit if both parties remained in closer contact. Perhaps the EEPSEA administrative staff could communicate by email on a regular basis to remind researchers how important it is that they maintain close contact with their advisors.

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<sup>3</sup> This second attribute cannot be in terms of which agencies will receive copies of the research report. Rather the pre-proposal must demonstrate a substantive connection between the expected approach and its probable outcomes of relevance to the policy process.

### **3. Research Products and Dissemination**

There was limited time available to undertake a full assessment of the quality of the EEPSEA research output. I note that the quantity of research materials is now quite impressive, and that it takes three dominant forms: (1) research reports; (2) policy briefs; and (3) special papers. This mix of documentary instruments is appropriate, but I would urge EEPSEA to assist its researchers to undertake an even greater effort to engage journalists in their home country concerning publicity about EEPSEA research. The workshop for Asian environmental journalists, held in conjunction with the November 1999 EEPSEA Workshop, is an important first step in alerting the region's journalists to the nature and scope of EEPSEA research. The next step will be for EEPSEA researchers to insure that journalists in their respective countries are alerted to research results as they become available.

Many researchers prefer to remain somewhat detached from the process of communicating their findings to a larger audience. But young researchers need to be reminded that their own visibility—and hence their career prospects—are directly related to the extent that they are seen as knowledgeable about environmental economics. They must be helped to see that journalists and the general public hold good research in high regard and that their professional advancement is very much aided by being quoted in the newspaper, being interviewed on the radio, etc.

We must keep in mind that EEPSEA is a capacity-building program and in that sense the quality of EEPSEA research has several components. First, there is the matter of quality in a narrow academic sense. Here, the concern lies in whether the right conceptual approach has been followed, whether the correct empirical techniques have been used, whether the proper empirical data have been employed, and whether the correct implications have been drawn from the analytical work undertaken. Second, the quality of the research may be judged on more general criteria concerning whether or not it proceeds logically from an important problem to an appropriate policy recommendation. Third, an important dimension of research quality concerns the extent to which young researchers are acquiring and using sound epistemological procedures given the environmental problems in their countries, and the policy environment into which research results must be projected.

On all counts I find the quality of EEPSEA research to be sound given the early stages of the program. The bi-annual workshops provide feedback from advisors and invited experts. Aspiring researchers have access to research advisors between meetings, and where this contact is frequent the research product is much enhanced. Having said that, we must recognize that there is still some distance to go in terms of solidifying the early gains. This solidification

would entail the creation of a reasonably stable and vibrant cadre of repeat research applicants to EEPSEA, and a small but steady intake of new researchers each year. The mix of experienced (in EEPSEA terms) and novice researchers would assure sustainability of a research cohort in each country in the region.

There is, apparently, a sense in the region that EEPSEA research funds are somewhat “expensive” to obtain. By “expensive” I mean that some researchers appear unwilling to submit themselves to the rigorous screening and interaction that is part of the project-approval process. Evidently the level of research funding is thought inadequate to compensate some potential applicants for the rigorous procedural and reporting demands of EEPSEA funding.

It is my judgment that there could not be a more profound indicator of EEPSEA’s early success than this. That is, within the research community—and among policy makers—the most serious threat to the credibility of a research program over the intermediate and long run is that it is unduly easy to get funding, and it is then simple to fulfill the terms of the research agreement with EEPSEA. A successful program will be one that results in first-class research output—and a vibrant community of researchers across the region. This can only be assured by holding to very exacting standards regarding who shall acquire the honor and prestige of being introduced as an EEPSEA researcher. Donors to EEPSEA cannot possibly wish it to be otherwise.

Indeed my recommendations elsewhere are intended to strengthen the interaction between researchers and the research advisors that might well be interpreted by the researchers as raising the “costs” of EEPSEA research support even more. But then one does not make progress by standing still.

#### **4. Program Impact**

The purpose of EEPSEA is to build environmental economics capacity in the region. The long-run strength of the program will be enhanced to the extent that EEPSEA research activities and products can continue to stress policy problems and possible solutions. It is important that EEPSEA research projects seek to explain particular economic phenomena—to understand why particular environmental outcomes are prevalent, and to explore the feasible policy prescriptions that may solve the problem. An important dimension of this type of economic research is to describe and clarify the circumstances that constitute the economic problem. Research concerned with explication goes beyond the traditional task of showing the advantages and disadvantages—often treated as the “benefits and costs”—of particular situations. Economic explication is concerned to show why certain situations persist.

Research concerned with economic explication is concerned with the nature of incentives operating at the individual level. Why do farmers adopt or fail to adopt soil-conserving technologies? Why are certain farming systems and enterprise choices—each with different polluting implications—used while others are not? What changes in prevailing incentive structures would be necessary and sufficient to induce behavioral changes in farming practices and enterprise choice that might reduce soil erosion? How can altered incentives at the firm level alter the polluting behavior of industrial enterprises? What new institutional arrangements and their accompanying incentive structures might be sufficient to alter the use of automobiles in congested urban areas?

Notice that in studies concerned with economic explication the researcher brings economic insight to the problem of understanding why particular anti-social outcomes (pollution, habitat destruction) obtain. We must recall that it is not always necessary to compute the economic benefits and costs of the *status quo*—and of some possible alternative—before policy makers will become motivated to confront environmental problems. Policy makers often know that certain environmental problems require rectification, even in the absence of an economist showing that the present value of the benefits of the *status quo* are less than the present value of the costs. If agricultural soil erosion is clogging waterways and harming downstream farmers or transport services, policy makers are unlikely to require a benefit-cost study to comprehend that this situation calls out for correction. If chemical pollutants are destroying coastal fisheries, policy makers are unlikely to require a benefit-cost study to determine that corrective action is called for. The protests of coastal fishers are often quite enough of a hint that doing nothing is no longer a feasible survival strategy. In each case, applied economic research can be essential in helping policy makers to understand the root causes of the problem, to focus on a few feasible solutions to the problem, and then—perhaps—to identify the most cost-effective solution to the problem. We must also not forget that applied economic research can be a powerful instrument in understanding feasible political solutions.

This latter point is absolutely essential. It is traditional in economics to draw a distinction between so-called “economic” (scientific) solutions to environmental problems and “political” (metaphysical) solutions. However, we must keep in mind that our economic advice must be such that it is conducive to understanding and action by politicians. One of the fundamental components in good applied economic research is clear evidence of the incidence of the impacts of the *status quo ante* compared to possible solutions. In this sense, evidence of the aggregate benefits and costs of particular solutions is much less compelling than is evidence of the incidence of economic impacts under several scenarios. By incidence we mean which individuals (or groups of individuals) will gain and lose under feasible policy alternatives. This evidence comprises economic information of profound importance to the policy process. In that sense,



EEPSEA should work hard to encourage research that emphasizes the distributional implications—the incidence—of existing environmental problems and their feasible solutions.

Turning to a related issue, particular environmental problems persist because particular economic incentives allow, indeed often promote, these undesirable behaviors among particular members of the polity—timber concessionaires, farmers, industrialists, etc. Applied economic research concerned with explication can offer insights as to why these situations persist. Perhaps property rights are unclear and therefore pollutants are readily discharged into the environment. Perhaps certain chemical compounds, for example agricultural pesticides, are subsidized leading to their excessive use. Policy relevant research is concerned with explicating these circumstances, and suggesting ways in which environmental problems might be solved.

EEPSEA must continue to encourage research proposals and subsequent research products that will help policy makers understand why particular environmental problems exist in the first instance. It is worth emphasizing here that most policy makers tend to be linear thinkers who constantly seek linkages between particular problems and feasible solutions. Certainly they often misidentify problems (confusing symptoms with problems), they may not be very adept at identifying causality, and they may get the solutions wrong as well. These problems notwithstanding, most individuals in a position of policy maker fancy themselves as problem solvers—as fixers of problems and as leaders. This reminds us that their world is generally ordered in terms of problems and solutions—ends and means.

Economics, in its applied form, is most useful when it can relate to policy makers in ways that they structure and define the reality they perceive around them. As above, this suggests that policy-relevant research is best when it connects with policy makers in ways that they think about problems and solutions. It is a safe bet indeed that few policy makers take most benefit-cost studies seriously. If they did they would be less inclined to favor projects with a negative NPV as we calculate that idea, and they would show more interest in projects with a positive NPV. They are suspicious of benefit-cost studies because they know that the outcome—a NPV or a benefit-cost ratio—is overwhelmingly sensitive to the assumptions made, and they do not trust analysts to be forthright about the implications of many of those assumptions. But there is a more compelling problem with benefit-cost studies in their eyes. That problem derives from the fact that policy makers rarely think about problems and solutions in this way.

The promotion of policy-relevant work on the environment in Southeast Asia will be enhanced to the extent that research questions are framed in a way

that relates to how environmental problems and solutions are perceived by the general public, and by policy makers. The recent study of salinity problems in the Mahaweli River system is an excellent example of just such applied economic research.<sup>4</sup> And while a form of benefit-cost analysis was indeed undertaken in that work, it was in reality an analysis of the economic impacts of various salinity regimes in the irrigation system. That is, there was no effort to determine the social benefits and costs of reducing salinity—is it “worth it” to Sri Lankan society to reduce salinity? Rather, salinity is perceived as a serious problem on the Mahaweli irrigation system and the focus of the study concerned the financial gains and costs of reducing salinity. We see a similar approach in the study by Catherine Frances Corpuz concerning pollution in Metro Manila.<sup>5</sup> A recent research report on automotive pollution in Colombo, Sri Lanka is also an exemplar in this regard.<sup>6</sup> These studies are perfect examples of policy-relevant research (and there are many more in the EEPSEA portfolio).

This discussion reminds us of the goal of EEPSEA—“to support training and research in environmental and resource economics...[and to be a]...catalyst for research and action.” This goal emphasizes a long-run commitment to the development of human capital in the region—a goal that is both compelling and necessary if environmental problems are to be remedied. It is possible, at this relatively early stage in the evolution of EEPSEA, to focus too much on whether EEPSEA research is having an “impact” on policy. We must be mindful that a coherent research program ought to first produce materials that help others to develop an understanding of the nature and causes of environmental problems. Only then can one presume to affect policies concerning the environment. We in the academy often imagine that all we must do to change the world for the better is to produce a nice coherent research report or a policy brief. Unfortunately the world is much more complicated than that, and the world of policy change—which equates with forcing people to alter their traditional (meaning long-standing) behaviors—is even more resistant to facile and uncontested adjustment.

Patience and persistence are the essential qualities in this business, with the payoff enhanced by a continual pipeline of compelling and solid research products, and with the continual development of a cadre of researchers. Indeed we must recall that there are two products of a program such as EEPSEA—the paper record of research reports and policy briefs, and the human capital personified by EEPSEA researchers and alumni. Some of these individuals will continue to do research, some of them will become economic advisors to policy makers, and indeed a few may become policy makers themselves. Whatever their

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<sup>4</sup> Thiruchelvam, Selliah and S. Pathmarajah. 1999. An Economic Analysis of Salinity Problems in the Mahaweli River System H Irrigation Scheme in Sri Lanka, EEPSEA Research Report, August.

<sup>5</sup> Corpuz, Catherine Frances. 1999. Pollution Tax for Controlling Emissions from the Manufacturing and Power Generation Sectors: Metro Manila, EEPSEA Research Report, September.

<sup>6</sup> Chandrasiri, Sunil. 1999. Controlling Automotive Air Pollution: The Case of Colombo City.

eventual station, they add to the stock of human capital in Southeast Asia with special expertise in an area of the gravest import. This, in the long run, will be the most remarkable contribution of a program such as EEPSEA.

#### **5. Regional Training Course in Environmental Economics (Los Baños)**

Some seem to regard the Los Baños course as the keystone of the EEPSEA program and this view may well be accurate. The course is very highly regarded by both those who have taught in it and those who have attended as students. The course is the first exposure to EEPSEA for the majority of those who eventually submit research proposals, and the teachers are instrumental in helping them to craft research proposals. The course evaluations indicate very great satisfaction across a range of attributes (Annex I).

Evidently one or two of the initial instructors were not well received by the students and it is encouraging that replacements were quickly found. These corrective actions reassure us that that EEPSEA personnel are attentive to quality. With the exception of this matter, it is apparent that the other instructors are exceptional.

In my comments above (1. The Project Cycle) I urged some modification in the proposal process. If adopted this change would remove the importance of the module at Los Baños concerned with developing proposals. I understand that the course will not be offered in 2001. Whether the course is re-instituted in 2002 is probably still being discussed. I believe that EEPSEA must continue to play a prominent educational role in course-based environmental economics in the region. Whether the best model is the Los Baños course, or something quite different, remains an open question. But I urge that the EEPSEA staff and the Advisory Committee begin discussions very soon about that matter.

There have been some promising initiatives in Vietnam that ought to continue. I might also suggest an approach that would bring EEPSEA in closer contact with other universities in the region. Specifically, it may be appropriate for EEPSEA to collaborate with one or two universities in 2001 to offer one-week (or two-week) modules in environmental economics at the end of a regular university term. The regular EEPSEA instructors might go to Bogor or UPM in Selangor or a university in Bangkok to offer the module they have previously offered in at Los Baños. These modules may in fact be stretched to two weeks in length. One might envision doing these end-of-term modules in 2-3 universities in 2001 and possibly in 2002. If the idea is successful then the same program might move to 2-3 other universities in the region. The point here is to take the course in environmental economics (and the excellent instructors EEPSEA attracts) to the students rather than bringing the students to the course. Regular university classrooms could be used, and the presence of a one-week or two-

week module on environmental economics at these universities would seem to hold great promise for recruiting a new cadre of the region's graduate students into environmental economics.

## **6. Bi-Annual Workshops in Singapore**

The structure and organization of the Workshops seems to have worked quite well. It may, however, be time to consider some slight modifications.

The segment of the program in which international experts make formal presentations has had rather mixed success. Sometimes these sessions have been extremely beneficial—with wonderful speakers and an engaged audience. Other times this has not, apparently, been the case. There have been times when the audience of current and aspiring EEPSEA researchers has seemed disinterested in the presentations. There was little interaction between audience and speakers, and what limited interaction existed was largely confined to the research advisors, other experts, and members of the EEPSEA Advisory Committee.

I do not believe that the unsuccessful sessions should be allowed to undermine an activity that has, at times, been very successful. We need to recall that for many of the aspiring researchers these plenary sessions are seriously intimidating. The room is full of international experts, the researchers feel themselves to be on trial since many are there to defend their proposal, and their level of training in economics—to say nothing of environmental economics—is often deficient. It is little wonder that they sit in silence. Their uneasiness could be remedied somewhat if early in the week the research students as a group could spend an hour or so with the invited speakers without the rest of the advisors and EEPSEA staff present. In this informal session the experts could get acquainted with the students, both experts and students could discuss their backgrounds and research interests, and the experts might even share some of their own early experiences—both the successes and the hard lessons learned. Indeed a session such as this might run for up to two hours. I believe that a session like this, early in the week's programs, would tend to break down some of the perceived distance between the experts and the students.

A second modification concerns the nature of experts invited to the workshops. It may now be time to invite more experts from the Asian region. Some of these experts need not necessarily be academics. I note below that there is a need to establish improved working relations with a number of environmentally oriented organizations in the region, including the International Center for Living Aquatic Resource Management (ICLARM), the International Water Management Institute (IWMI), the Asian Development Bank (ADB), and the Center for International Forestry (CIFOR). In addition there are development

research organizations in the Philippines and Thailand that could very easily contribute expertise to the EEPSEA program.

Finally there has apparently been some discussion about moving the workshops around the region. At this point I believe that would not be a good idea. The EEPSEA staff is already spread too thinly across a number of activities and to organize the workshops in various settings would most assuredly steal precious time away from more substantive administrative and programmatic needs.

## **7. Program Themes**

I believe that EEPSEA researchers—and the research outputs they produce—would benefit from a renewed emphasis on high-priority research themes. While this has been done in the past, it may be wise to reemphasize this aspect. Steps could be taken to inform researchers that EEPSEA is particularly interested in receiving proposals in selected areas of research, with the understanding that proposals in any topic will of course be considered. But it should be made clear that EEPSEA is particularly partial to certain environmental concerns and that these priorities reflect research and policy issues considered pressing in the region. As an example, EEPSEA might consider suggesting its interest in receiving proposals in the following priority research areas:

1. Energy Policy (urban transport, efficiency in energy use)
2. Fisheries and Coastal Resources (artisanal fisheries, commercial fisheries)
3. Water Resources (urban, agricultural)
4. Land Use and Forestry (uplands, mangroves)
5. Urban Environmental Problems (air pollution, water quality, solid waste)

It may well be that most existing EEPSEA research projects now fall into these categories. But perhaps a renewed emphasis on research themes warrants consideration.

## **8. National and International Centers in Asia**

I suggest that EEPSEA begin to make efforts to involve environmental research and policy organizations in Asia. I earlier urged that staff at these organizations be asked to participate in the Singapore workshops and this participation would facilitate enhanced programmatic collaboration with these regional organizations whose programs are coincident with the themes being pursued by EEPSEA. I call particular attention to the International Rice Research

Institute (IRRI), the International Center for Living Aquatic Resource Management (ICLARM), the International Water Management Institute (IWMI), the Center for International Forestry (CIFOR), and the Asian Development Bank (ADB). In addition, there are a number of national organizations that could provide important regional linkages for EEPSEA researchers.

In the previous fiscal year (1998-1999) EEPSEA collaborated with the Philippine Department of Environment and Natural Resources (DENR) and the Environment and Natural Resource Accounting Project (ENRAP) to offer a course for staff on the use of economic principles in environmental management. This is a good example of how EEPSEA can deepen its programmatic ties in the region.

#### **9. EEPSEA Senior Research Associates**

I suggest that EEPSEA consider ways to increase the involvement of individuals who have previously received research support. These individuals should be engaged in teaching and research in universities in the member countries, and they should have a commitment to applied research with a potential to affect public policy. These individuals might be called EEPSEA Senior Research Associates.

The Senior Research Associates (SRAs) could be valuable in encouraging other researchers in their respective countries, they could advise and mentor compatriots in the development of research proposals, and they could play a central role in promoting the policy impact of EEPSEA research results in their respective countries.

#### **10. Partnering**

There seems to be some initial success in research partnerships between individuals from several countries. It is my understanding that researchers from the Philippines and Vietnam have forged productive links, and that the same is true for researchers from Thailand and Laos. These ties should be encouraged and strengthened. The EEPSEA Senior Research Associates could play a leadership role in facilitating these linkages.

#### **11. Action on 1996 Evaluation**

The 1996 evaluation suggested that EEPSEA devote more attention to short courses in other parts of the region so that Asian students would not need to be sent abroad for this training. This aspect has been realized in terms of the Los Baños course, and training sessions in Vietnam. The above-mentioned course for the DENR in the Philippines is yet another example of this. EEPSEA recently

conducted a 5-day course on the science of pollution control and it was very well received. Again I would urge that EEPSEA continue this trend toward more environmental economics courses in the region.

The 1996 Evaluation urged that greater effort be made to link EEPSEA programs with national media. As mentioned previously, EEPSEA researchers should be encouraged, indeed expected, to establish contacts with the media during the course of their sponsorship. The special session for Southeast Asian journalists at the November 1999 Singapore workshop was a perfect opening but unless there is follow through in each country this initiative will lose essential momentum.

The previous evaluation urged that efforts be made to create partnerships with other programs and organizations in the region. It is my impression that this is being done and that it is bearing fruit.

Finally there must be some attention devoted to the matter of EEPSEA staffing—an issue raised in the 1996 evaluation. If I may paraphrase Winston Churchill, rarely has so much been done to such good effect by so few. All of my previous recommendations address the matter of deepening and spreading the good effects of the EEPSEA program in the various countries in Southeast Asia. If those steps are not taken soon, there will be few seeds from which country-based programs can emerge and eventually flourish. It is now essential that EEPSEA nourish evolution—indeed devolution—throughout the region so that at some time in the future national governments and private donors in the region will assume the financial burden now shouldered by the Canadian government and the international donor community.

This logical evolution requires much more programmatic and administrative support in several countries—an activity that seems virtually impossible under current EEPSEA staffing arrangements. An earlier recommendation concerns the establishment of EEPSEA Senior Research Associates. While these individuals must carry some of the programmatic burden, they cannot do so without administrative assistance.

## CONCLUSIONS

The EEPSEA program must be regarded as a success on practically every dimension of its program. The training in environmental economics, the workshops and short courses, the quality of research output, and the emerging cohort of qualified environmental economists all suggest that the first six years have been remarkable indeed. There is another measure of success and that is the responses of those individuals who have participated in EEPSEA programs. In Annex A-H appear a number of tables and tabular materials documenting the nature of responses from these individuals. Annex I contains a number of graphs indicating the exceedingly high level of satisfaction of these respondents. There is overwhelming agreement with the idea that EEPSEA improved their research skills, improved their teaching and training skills, helped them to forge interdisciplinary links, exposed them to international experts, helped them disseminate research results abroad, sponsored useful workshops, that the workshops were well planned, that there was a good balance between micro-oriented issues and macro-oriented issues, that the blend between theory and practice was good, that the literature obtained there was useful, that EEPSEA could be relied on for good and prompt advice, that the EEPSEA reports (research reports, special papers, policy briefs) were useful, that the newsletter and website were also very helpful, and that administrative support was exceptional.

These early successes should not be interpreted to suggest, however, that change is not desirable. It is time to begin what we might call the "second phase" of the program—a period in which some fine-tuning is called for on several fronts, and some more marked change is called for on other fronts. In this latter category, I suggest changes in: (1) the project cycle; (2) the role of research advisors; (3) how research is formulated and implemented; (4) the nature and frequency of the Los Baños course; (5) research themes; (6) linkages to other organizations in the region; and (7) staffing. These proposed changes do not suggest flaws in the current arrangements as much as they represent logical evolutions in a program that must evolve as it matures.



## **PART II**

**GELIA T. CASTILLO**

## FINDINGS

In the 1990 Bergen Conference on Sustainable Development: Science and Policy, the synthesis of the deliberations included the following reflections:

*"The message conveyed by OUR COMMON FUTURE is a very powerful one. It is more than interdependence; more than international cooperation; more than technology and resource transfers; more than intergenerational equity; more than science and policy dialogues. OUR COMMON FUTURE provides the soul, the ethics, and the ethos for our actions. Without this, no sustainable development is possible. Most of the environmental issues are confrontational and divisive, whether between North-South; rich-poor or between disciplines. The SCIENCE COMMUNITY has the obligation to provide the empirical and knowledge base for the faith we have in OUR COMMON FUTURE."*

In EEPSEA we found a program where the science community can provide the "empirical and knowledge" base which we need in more specified, more concrete, and even more quantitative forms to address the environmental problems and consequences which will, in many ways define OUR COMMON FUTURE.

As Maurice Strong, Chairman of the Earth Council put it:

*"As one of the first projects launched after the 1992 Earth Summit, EEPSEA has played an important role in integrating economics and environmental perspectives. The battle for sustainable development will be won or lost in Asia. EEPSEA's network of researchers, and the information they produce are a tremendous resource for those engaged in that battle."*

The case study done by the Center for Strategic Management in its Learning Partnerships: A Review of IDRC Secretariats had this to say about EEPSEA's Goals, Missions, and Objectives:

*"Unlike some other Secretariats, EEPSEA's mission is somewhat modest, if not understated. In fact the word vision or mission were nor even used in the documentation. Rather, the mission is referred to as a general objective. Also, unlike those of some other Secretariats, this general objective or mission is extremely well focused. It states:*

*"The general objective of EEPSEA is to establish an integrated program of research and capacity building on economy and environment in Southeast Asia, by providing participants with opportunities to share information and*

*experiences with peers, while making use of a range of support services. The specific objectives of the program are:*

- *To finance research projects on economy and environment, focusing on the internalization of external costs;*
- *To provide support for researchers through the provision of literature resource persons, peer review, attendance at network meetings, a newsletter and other such facilities;*
- *To provide training to current and prospective network members to increase their capacity as researchers, teachers and policy analysts;*
- *To disseminate results of EEPSEA research projects to policy makers in local, national, and regional form."*

With these as background, the objective of this 1999 Evaluation Report is:

To assess the appropriateness of EEPSEA's *modus operandi* in promoting the utilization of research results and to suggest ways in which utilization and policy impact might be further enhanced. This involves the following:

1. Assessing the results of EEPSEA's August 1999 "tracer study" of recipients;
2. Assessing the range of activities proposed in EEPSEA's Program of Work;
3. Identifying areas of specialization or comparative advantage for EEPSEA;
4. Identifying new audiences or partners for EEPSEA's work;
5. Identifying activities or audiences where EEPSEA should not be active because of inadequate resources, comparative advantage or other reasons;
6. Recommending new activities;
7. Defining reasonable expectations and indicators for impact over the next five years.

Considering that EEPSEA is only about seven years old, the young environmental economists' contribution to the *good earth as our common good* can be best assessed through what they have done with what EEPSEA has provided them.

## **1. Results of the "tracer study" of EEPSEA Alumni**

There were 73 questionnaires returned out of a total of 148 sent out. This amounts to a little less than 50 percent response rate. Although this is not particularly high, it is better than the 31 percent response rate for the Assessment Questionnaire. In order to do a reasonably good tracer study there must be enough of a database on those EEPSEA participants we want to trace so we know whom we got and whom we missed. This database is absolutely necessary because participants-cum-trainees-cum-researchers are EEPSEA's primary products. They are the first and most basic outputs of EEPSEA's program.

Despite this weakness, however, the returned questionnaires give us indicative answers to the general questions on what EEPSEA's training, research grants and other forms of support have done to the trainees or what the trainees have done with them. Incidentally, the 1996 survey also had a 50 percent response rate.

### ***a) Jobs/positions held by respondents***

Table 1 shows that 80 percent of the EEPSEA "alumni" are from academe/university. Only 20 percent hold positions in a ministry or government department, policy-making body, country program on environment and agricultural R & D coordinating office. This means that utilization of research results will come through teaching, and/or part/time participation in bodies, which have policy and program implementation functions and through linkages with such bodies. This also means that if any policy influence is expected this is likely to come through part time participation of EEPSEA alumni in policy-relevant activities; through more indirect means mediated by other persons, media or other organizations; or through direct leadership of some of these alumni.

### ***b) Uses made of knowledge etc. from EEPSEA***

Because of the academic/university nature of jobs held by the respondents, more than 67 percent of the 169 responses to the question of what use they made of the knowledge from EEPSEA's training, research and or reading materials were related to their teaching functions such as: starting a new university course; teaching an existing university course; and offering a short course. It is interesting that 23 respondents had written some kind of a textbook or publication and 7 had even attempted to translate a textbook into a local language. Clearly, there is high degree of utilization for teaching of what they have learned and what materials they have received. But even more encouraging is the fact that 56 percent of respondents have contributed to local meetings and 33 percent to international meetings (Table 2).

*c) Additional courses taken after exposure to EEPSEA*

Exposure to environmental economics through EEPSEA has led to 34 percent of respondents taking additional courses related to environment or economics (Table 3). Some 23 specific courses offered abroad were attended by the respondents. They were held in the Philippines, Chiang Mai, London, British Columbia, Malaysia, Ho Chi Minh City (but internationally organized), Sweden, United States, Japan, Singapore, Germany, Scotland, Korea, etc. The courses ranged from sustainable agriculture; agroforestry; ecological economics; Vietnam's transition into the global economy; farming systems in the highlands; financial mechanism for Asia and the Pacific; environmental valuation; financial aspects of agricultural policies; environmental economics; environmental valuation; financial aspects of agricultural policies; sustainable development; public policy; institutional options for river basin management; economic development experience of Korea, Singapore; industrialization; trade and economic policies; and environmental statistics.

Another 13 courses were enumerated but did not mention any specific place where they were offered. They were probably taken in their own institutions in their countries. The course topics included sea and coastal resource management; ecosystem of mangroves; natural resource management and rural development; biodiversity; ecology; wetlands; gender and environment; co-management in fisheries; environmental economics; gender and environment; environmental valuation; and environmental planning and management.

For a third of the respondents there was an effort to learn more about environment and economics after the EEPSEA exposure with a total of 36 different courses attended (Annex A).

*d) Reported use of results from research projects*

About two-thirds of the respondents reported use of results from their projects (Table 3). They were presented at local/national conferences (48%), presented at regional/international conferences (30%), presented to local policy-makers in a seminar (38%), 26 percent managed to get research published in a journal (most probably local); 11 percent were quoted in another publication but only 8 percent were cited in newspapers and television (Table 4).

Much more interesting are the ways research results were used by local authorities; 20 percent of respondents mentioned that local authorities launched an implementation project; 7 percent changed legislation or institutional arrangements; 10 percent instituted fees to finance environmental improvement;

and 17 percent started to look into the feasibility of doing at least one of the above.

Increasing credibility of the researchers is also indicated by the fact that about a third of them have been invited to participate in a committee or task force and a similar number were consulted at different times on other issues (Table 4). The usefulness of EEPSEA participants in the local community is very important because many environmental problems have immediate local significance. The locals are usually the ones who benefit or suffer most from whatever happens to the natural resources in their surroundings. They are the "grassroots" so to speak.

***e) Additional research undertaken after EEPSEA exposure***

About three-fourth of respondents said they had undertaken additional research in environmental economics after the EEPSEA exposure (Table 3). There were 75 different research topics mentioned by 53 respondents. These include such a wide array of research on environmental problems such as: forest land allocation; new method of environmental assessment in Ho Chi Minh City; economic and health consequences of pesticides; impact assessment of Asian Road project; valuation of sanitation options; community-based resource management in the uplands and among ethnic minorities; developing stable fishery resources; economic instruments to control water pollution; clean air act; artisanal mining; value of groundwater; ecotourism value of a national park; forest management schemes; water-pricing schemes; climate change; forest taxation; valuation of mangrove wetlands; shifting cultivation; economics of soil erosion; impact assessment of dams; analysis of basin development; etc. (Annex C).

Although some of these were cited as broad research topics, the majority appear to be identified as actual research projects. Even if only 55 out of 75 research topics turn out to be specified research projects, this is still a rich harvest of research initiatives in environment, economics, and environmental economics. This also suggests that the environmental economists have been drawn more and more into real-life environmental problems in their countries.

***f) Ways knowledge and skills gained through EEPSEA were used in their current jobs***

Ninety percent of respondents enumerated ways their knowledge and skills gained through EEPSEA were used in their current jobs. Sixty-seven percent mentioned various uses for teaching purposes; 38 percent for research; 39 percent as inputs into development program and policy-making; 8 percent had inputs into institution building (Table 5) such as the establishment of an

Environment Economics Unit in the University; start of a new Centre for Gender, Environment, and Sustainable Studies; sharing materials and knowledge with colleagues; establishing network; organizing workshops similar to EEPSEA; applying organizational skills to the coordination of small project team; etc. Those who contributed inputs into development program planning and policy-making deserve a closer examination for this takes us more into the realm of more direct utilization and policy impact. Examples of such impacts are: provided relevant research materials for local board who makes rules relating to agricultural and rural development; integrated environmental issues into research and development priority setting; assessed environmental damage on public health and agricultural production in one district; evaluated proposed policies like administrative orders and congressional bills; contributed to US-RP agreement on Transport of Hazardous Wastes; participated in negotiations on the Philippine Clean Air Act which was passed recently; commented on design of various projects developed by UNDP; participated in policy design for forest resource management project; engaged in consultancies; and made inputs into public investment program plans and into project planning, appraising and evaluation (Annex C).

While teaching was most benefited by the EEPSEA exposure, followed by research, the inputs into development program implementation and policy-making were also very evident.

*g) Career advancement obtained through help from association with EEPSEA*

More than half of the respondents (Table 3) indicated that their association with EEPSEA helped them advance their careers: mostly through part-time consultancy; membership in committees; technical panels and advisory bodies (28%); part-time participation in research projects or teaching (25%); promotion to higher position (11%); obtaining new full-time job (6%); and 4 percent got scholarships for further study.

For those who have training in environmental economics, new opportunities appear to have opened up through other part-time involvement in research and environment-related activities but new full-time positions are rather few. Since most of the EEPSEA participants are in teaching and in academic positions, their participation in non-teaching activities enabled them to contribute as well as to learn about issues and problems beyond the classroom which are of national concern (Annex D).

*h) Additional benefits or impacts from association with EEPSEA*

Seventy-eight of the respondents with 101 responses acknowledged additional benefits from their association with EEPSEA. Besides improved knowledge and research skills (38%) which are the direct benefits, respondents also mentioned *networking* (opportunity to meet other people in environmental economics in Southeast Asia and elsewhere); access to information (30%); more career opportunities (14%); learned from great resource persons (9%); made international links (7%); was able to present research and obtained feedback (4%); contributed to institutional development through research materials and equipment from EEPSEA (3%); gained experience in research grantsmanship; and received financial support for travel abroad (2%) (Table 7).

Some of the interesting quotes are as follows:

- *"EEPSEA is a significant GATE for Southeast Asian researchers to connect effectively to academic and research activities in environmental economics within the region and in the world."*
- *"Recognition from office and others on my skills gained from EEPSEA training."*
- *"Became more self-confident in natural resource and environmental economics issues."*
- *"More knowledge and training enabled me to be referred to as an 'expert.'"*
- *"Working with international experts became easier."*
- *"Enabled me to get a consulting job."*
- *"Just being exposed to extremely knowledgeable resource persons/researchers who are so generous with what they know and who are sincere in doing something good for the environment is already a great benefit in itself."*

Curiously only three respondents mentioned benefits from the *WEB-SITE* and one cited Dr. Glover as his access to information (Annex E).

***p) Ways EEPSEA could assist "alumni" to achieve greater impact from their work***

Seventy-eight percent of respondents suggested ways EEPSEA could assist them to achieve greater impact from their work.

There were 69 suggestions made to this effect (Table 8), more than two-thirds of which were asking EEPSEA to provide more information, publications, etc.; more technical and financial support for research; and more training, workshops, and conferences. Others asked that the network be kept for continuing exchange and that assistance be provided to get their research published. There were few thoughtful, constructive, and specific suggestions



such as: joint research around a common theme; data base of EEPSEA researchers; collaborative research projects with policy-makers at the national level; follow-up activities to make the course more useful to participants; and EEPSEA could serve as a "broker" to match projects with researchers and researchers with projects (Annex F).

Majority of the respondents were thinking about more of the things EEPSEA provided them before. They were oriented toward their own individual professional growth and less toward achieving greater impact from their work, although the connection between the two cannot be denied. Perhaps this is to be expected at the early stages of capacity building in a relatively new field like environmental economics.

### **Summary of Findings of the Tracer Study**

The results of the tracer study show not only very positive utilization but also of "multiplier effects" of EEPSEA training, research, and other support services. Because 80 percent of the respondents are from academe it is predictable that the utilization will be related to their teaching functions followed by research. EEPSEA has stimulated more learning and more research in the fields of environment and economics. Much less predicted but has nevertheless occurred is the fact that alumni had contributed much to local/national meetings and even to use of research results by local authorities. Through their part-time participation in environment-related program and policy-making bodies, they have made inputs into the policy-formulation and implementation process.

Career advancement has also come but more through these part-time but nevertheless important involvements in environmental issues. New full-time jobs were not many; neither were scholarships for further study. Additional benefits from the EEPSEA associations were acknowledged by 78 percent. Besides improved knowledge and skills and the resulting self-confidence, much value was placed on networking opportunities; access to information; exposure to great resource persons; and career advancement.

Regarding ways EEPSEA could assist them to achieve greater impact from their work, majority were asking for more of the things they were provided before. However, there were some thoughtful suggestions which will be discussed in another section.

**16. Assessment of activities in EEPSEA's Program of Work: July 1, 2000 - June 30, 2001**

The Program of Work is extremely rich for a very lean Secretariat but our Vietnam visit and the accompanying interviews we had with policy-cum-program implementers and EEPSEA alumni gave me enough basis to endorse strongly the (a) in-country small grants program, (b) the deepening of environmental economics in member countries, (c) the national association in Vietnam and (d) the media outreach in-country. On a very "opportunistic" basis, Introductory Seminars not only for policy-makers but also for non-economists (physical and biological scientists who are working on natural resource management issues and non-economist social scientists who are potential research collaborators) can be very instrumental at particular times to underscore the policy-relevance of a particular research project or series of research projects. The seminars for non-economists, if they do not qualify for the in-country or regional short course are essential preparation for interdisciplinary research projects and interdisciplinary teaching.

Curriculum Development, EEPSEA Chairs, Masters Degree Awards, Post Doctoral Awards, Dissertation Fieldwork Awards, and Institutional Collaboration must come together in EEPSEA's efforts to institutionalize environmental economics beyond the EEPSEA program. What appears to be ad hoc must be purposeful because each one has a cost and long-term implications.

The following statement about the Los Baños Course which says: "It may not be feasible to offer the course in 2001, due to heavy demands on the time of the Secretariat and resource persons in 2001 stemming from in-country activities" is something this report endorses but in a firmer manner. EEPSEA should take a breather from this course so its financial and human resources could be devoted to follow-up, reinforcing, and deepening activities at the country level. Hopefully the critical mass of activities will contribute toward improved teaching; better-quality and better-communicated research outputs; greater visibility for environmental economics; more interaction between policy-makers, program implementers and researchers; increased research collaboration between the university and the government departments such as the Plant Protection Department, etc. If these things happen in some way, perhaps even policy influence will not be far behind. Such happenings are not unrealistic to expect in Vietnam and probably Laos and Cambodia too, based not only on EEPSEA's but also on the experiences of other programs.

The Program of Work regards the biannual workshops as the focal point of EEPSEA's program and according to the budget, also the most expensive. From the observation of a novice to this event, the workshop was expected to

perform many functions: mentoring; critiquing; group working; final research paper; and research proposal presentation and the "great speakers-great papers" in plenary sessions. My non-expert assessment is that the research mentoring could be the best part. Working group sessions were characterized by each individual researcher making a presentation to the "group" which is not quite a group but rather a collection of individuals listening to the lively intellectual exchange among resource persons. The group must become a group before it can be a working group. What they have in common must be made evident and the value of coming together highlighted both in theory, method and application. But the assessment of the other reviewer must be sought on this matter.

As someone whose expertise in environmental economics is practically nil but whose appreciation for its value is very high, the plenary sessions in the Singapore biannual workshop in November 1999 were less than expected. Although the judgement on this is best left to the expert member of the review team, it might be useful to point out that the 1996 evaluation report of Mohan Munasinghe mentioned the following:

*"Despite the high ratings received by resource persons, about a third of all the respondents indicated that the plenary papers were only average. Given the importance of biannual workshops and the key role of guest speakers, continuing efforts are justified to ensure that the plenary speakers are both high caliber and well-prepared."*

This report concurs with this observation particularly because there is a cost involved which might have more exciting alternative uses. The bottom-line suggestion is "Please revisit the concept, format and objectives of the biannual workshop."

Based on my first and only encounter with the Advisory Committee, could not they have been eminent enough to be the plenary session speakers at least for one workshop. There is an apparent balance in the Committee between the "Policy and Program Types" and the "Theory and Method Types" plus someone who have experience in bridging the two. This mix of expertise and experience in the Committee will help meet the dual demands of the participants, which are reflected in these two comments:

*"For the plenary, it is now high time to invite one policy-maker from the region to speak on policy or on impact concerns in the region. This will help forge stronger links between EEPSEA researchers and policy-makers."*

*"EEPSEA may assist in arranging for the researcher to work with technical international advisers instead of the regional ones. Regional advisers lack knowledge regarding the technical stuff in the literature."*

If some savings can be achieved from the temporary suspension of the Los Baños Course, something could be done about the Secretariat staff. The suggestion is for EEPSEA to hire associates on a part-time basis to pick-up some of the "transaction time" required for the implementation of the in-country programs. Additional help in getting research results published will be needed. We would also want to reiterate the lack of a good database on EEPSEA's participants and activities. An EEPSEA associate in-country could have helped improve the response rate to the questionnaires. EEPSEA activities need follow-up and periodic monitoring to keep track of what is or what is not happening.

Saving on needed staff is probably false economy because EEPSEA fails to capture all of its impacts.

#### **17. Identifying Areas of Specialization or Comparative Advantage for EEPSEA**

Although environmental issues are part of the everyday news and damage to the environment is greatly lamented, actual steps to do something about the environmental problems are few and far between. EEPSEA as a program in environmental economics is probably the only one in the Region that is developing research and teaching capacity so that environmental problems can be more empirically assessed rather than simply anecdotally described and market-based instruments designed to address such problems. EEPSEA is a unique program and as far as we know, the only one who occupies this niche in the region. It has created its own comparative advantages and should therefore try to "exhibits its wares" much more widely and prominently in order to get as much mileage from its investments as possible.

The dual window structure of the research program appears to be appropriate up to this time although the other reviewer would be a better judge of this. However, the working groups seem to require additional nurturing to make them working groups so they can be eventually develop a life of their own.

A perusal of the research reports gives one the impression that the focus on market-based instruments is not always accompanied by a serious consideration of the institutional arrangements required to make these instruments work. Munasinghe had suggested that the interface between environmental economics and social issues such as property rights and community ownership be given attention by creating a new working group.

The challenge to EEPSEA is to institutionalize environmental economics in the region without being there as a program forever.

## **18. Toward an explicit mission and strategy for EEPSEA**

Because of the anticipated overlaps in the tasks assigned to this reviewer this section of the Report combines the following three tasks:

- recommending new activities;
- identifying new audiences or partners for EEPSEA's work;
- identifying activities or audiences where EEPSEA should not be active because of inadequate resources, comparative advantage or other reasons.

All three of these will be addressed in this section called "Toward an explicit mission and strategy for EEPSEA."

### *a) The need for a more explicit strategy*

Having been through six years of implementation; an expenditure of about \$8 million; very positive (glowing) program reviews; and EEPSEA's assessment that it has established itself as "a catalyst for research and action", EEPSEA is past the age of simplicity. Its mission goes beyond the slogan "Greening Economics in Southeast Asia" and beyond the so-called understated objective of "supporting training and research in environmental and resource economics across the region."

The decision to engage in a small grants program and to deepen environmental economics in member countries is an explicit expression of an implicit strategy. Task A of this review which is "to assess the appropriateness of EEPSEA's modus operandi in promoting the utilization of research results and to suggest ways in which utilization and policy impact might be further enhanced" is tacit evidence that EEPSEA includes in its mission -- the promotion of research utilization and policy impact. Therefore EEPSEA must make this part of the mission along with the institutionalization of environmental economics as a field of study in the Region, more explicit even within itself. This should include thoughts about how to achieve this mission via a strategy or set of coherent strategies which allow for flexibility along the way. Whether or not it is articulated, EEPSEA has a strategy albeit seemingly ad hoc through a "menu of activities." Making the strategy transparent and explicit through forward thinking and participatory consultation will stimulate a more systematic analysis of options; priority settings and relevant inputs from sponsors, advisory committee, partners, alumni, resource persons, significant policy makers, etc. Such thinking will also begin the process of OWNERSHIP of the program by significant others so that environmental economics will leave on after EEPSEA.

Years of experience in international development have taught us that it is easier to build capacity than it is to use and maintain that capacity. Therefore it is never too early to plan for the institutionalization of that capacity to continuously build and use capacity. But EEPSEA cannot be faulted for being remiss in this regard. It has in fact taken steps, early in its life, to move toward this goal.

There are now about 180 participants who have received EEPSEA support of one form or another and 70 research projects in different stages of implementation. As already revealed from the tracer study, there will be increasing demands for further training, research grants and other support services from the alumni themselves. Fundable proposals resulting from the Los Baños Course were 6 out of 23 or 26 percent in 1997; 4 out of 26 or 15 percent in 1998; and 8 out of 23 or 35 percent in 1999. The in-country small grants programme will doubtless generate more research proposals. By this time, EEPSEA would already have some sense of which institutions, individuals, countries, partners, linkages show more promise than others. Is it too early to drop those who failed to deliver; those who have other sources of support and for whom EEPSEA is small; or is it time to intensify support for those who need it in order to go the extra mile in research, teaching or policy-influence? What about those who have not yet been touched by EEPSEA? Will EEPSEA's "net" continue to be cast wide or should it start to narrow down its sphere of operation? These questions are better answered within the context of an over-all mission and strategy to accomplish that mission.

A strategy for EEPSEA whose mission includes support for training and research in environmental economics including the promotion of research utilization and enhancement of policy impact in the region must be articulated more explicitly. This idea does not originate from this review. The components of such a strategy can be gleaned from the program as it has been implemented but they are not labeled as such. Rather, they are referred to as a "menu of activities." There is nothing new about the suggestion. Munasinghe in 1996 called for a review of EEPSEA's basic objectives to clarify priorities and potential trade-off. He also suggested that the proposed expansion of activities be structured and planned carefully. He likewise recommended that clearer guidelines be established to help choose among multiple objectives as EEPSEA moves into the next stage of existence. The example he gave is the trade-off between research/teaching skills and achieving policy impacts. On this issue, he said:

*"It would be preferable to continue the focus on capacity building, despite the pressure to demonstrate dramatic policy successes. Developing a cadre of high quality environmental economists is a prerequisite for providing sound policy advice, and once the capacity reaches a critical*

*mass, policy impacts will follow. By contrast, forcing policy implementation prematurely without adequate preparation is likely to weaken credibility and be counter productive."*

This is a dream most of us have, but in real life, policies do not wait for research. As a matter of fact, no one research projects unless truly spectacular leads to policy success. It is a much more humbling experience than that. The road to policy influence is neither neat nor tidy. The most sobering remark on this matter came to us from a very influential policy-maker in the Region when asked about how to improve the policy influence of research. He said: "The trouble with researchers is they tend to substitute research for wisdom."

Capacity-building for researchers as well as teachers in environmental economics should include field exposure not only to the environmental problems they are researching whether in forestry, fisheries, pesticide use, mining, water pricing, but also to the institutional settings of program implementation and policy-making. Idealism need not be naïve. There is as much learning that comes from this exposure as from rigorous data analysis. The unilinear vertical transfer of influence from research results to policy probably rarely happens. On the other hand, experience has shown that when researchers are knowledgeable about field, program and policy realities on top of good analytical skills, their credibility goes up a notch or two. Furthermore there are different kinds of policies (big, small, indifferent) and different degrees of susceptibility to research influence depending upon the salience of the target policy and the political influence of vested interests. Quite often, the definition of common good depends upon where one sits or better, where one stands. This is also something researchers must learn and should be built into their training program.

#### *b) Lessons from the Hanoi visit*

Regarding the issue of the trade-off between research/teaching skills and policy impact, our visit to Hanoi, the meetings with staff from policy-implementing agencies like the Plant Protection Department (PPD) of the Ministry of Agriculture and Rural Development (MARD) and the individual interviews with Vietnamese alumni gave us valuable insights. The issues are probably not one of trade-off but of weaving them together toward a common goal. The experience in Vietnam illustrates this eloquently. The seminar on the "Impact of Agro-chemical Use on Productivity and Health in Vietnam" presented by one of the university-based researchers triggered a number of reactions from the non-university staff from five different departments of MARD like the National Institute of Plant Protection; Department of Science and Technology; Department of Agricultural Policies; Department of Agricultural Extension and the Northern Pesticides Control Center. There were such gentle remarks as: Universities only deal with theory and academic matters; researchers should go

to the field because it is important to have practical experience; PPD did not know anything about the study; the project is just a case study done in a few places but their agencies have time series data from all over the country; any research cooperation with their departments can be arranged. These reactions are not unexpected because experience in similar programs elsewhere has also shown that it is easier to network regionally and internationally than it is to network inter-institutionally and even intra-institutionally within the same country. On the positive side, the director and deputy director of PPD attended the meeting for two full mornings. They were very much interested not only in the Vietnamese study but in Dr. Agnes Rola's discussion of the Philippine experience in addressing pesticide policy and the role of research and empirical analysis in the development of guidelines for pesticide policy. They want to be an active participant in the Southeast Asian effort along this line.

One-on-one interviews with EEPSEA alumni generated the following observations/comments and suggestions:

1. It is useful to train research teams (interdisciplinary and inter-institutional) rather than just individual researchers. Being trained together enables them to develop personal relationships which gives them access to data on the one hand and access to knowledge and skills on the other hand. They do not need to resort to "data purchase" from those who have them.
2. Research collaborations are interpersonal; only partly inter-institutional. As one of them said: "If we are friends, we have no problems in research collaboration."
3. Quality of training held in-country could be lower than the quality of training in the regional course because of the quality of trainees is different.
4. Although the alumni are newly trained in environmental economics and some have had only one project in their "research belt", they have prepared teaching materials; presented seminar papers; published articles locally; and have immediately become "experts" such that they now belong to committees, task forces, etc. on environmental issues. Because there is a high level of public awareness regarding environmental problems, there is a demand for the expertise, the analysis and the written papers. As revealed in the tracer study, the alumni have wittingly or unwittingly been drawn into the "policy influencing" process. We did not get a sense of "forcing policy implementation." It just seemed like a very natural consequence of their training. In a manner of speaking, there is a demand for their participation in environment-related issues. They are in-fact the country's "experts" in this field. Perhaps the best thing EEPSEA can do is to be supportive of the alumni who find themselves in such



situations by watching over "quality" of research and teaching. Can resource persons be used for this oversight role as they participate in the in-country training?

*e) The components of the EEPSEA Strategy*

Based on the way EEPSEA has been implemented, reported, evaluated, and programmed for work until 2001, there are 5 identifiable components of an EEPSEA strategy:

- Training strategy and institutionalization of environmental economics in the region;
- Research strategy;
- Strategy to enhance public awareness and policy influence;
- Networking strategy;
- Partnership strategy.

The recommendation of this review is to elaborate on these different components indicating developments from the past to the present, to the future with its mission of beyond simply supporting training and research in environmental economics to achieving research utilization and policy influence. The above mentioned components are not mutually exclusive. They are interdependent; reinforce of each other; and if pursued coherently could contribute more cost-effectively to EEPSEA's mission.

*e) New activities recommended for each of the components of the strategy*

**d).1. Training and institutionalization of environmental economics in the Region.** Perhaps it is time for EEPSEA to identify the potential resource institutions in the region which will receive more intensive attention because they will be prepared to offer M. S. and eventually Ph.D. programs. Along with this preparation comes a policy of gradual devolution of the in-country and regional training courses to such institutions with EEPSEA playing a diminishing role. This could take place over the next 5 to 10 years. Choice of the institutions should depend not only upon number and quality of staff but commitment of the institution and willingness to put in their own resources in a gradually increasing manner. This preparatory period is time, talent, and human resource intensive. Besides training staff from short-term to Ph.D. to post-doctoral studies, curriculum development is crucial. But EEPSEA already has this in mind, albeit in ad hoc fashion. EEPSEA chairs, institutional collaboration and the various awards are all efforts in this direction but they are not focused on particular institutions but more on individuals.

There is nothing inherently wrong with this approach provided EEPSEA recognizes that such activities are necessarily diffuse. What does EEPSEA mean by critical mass of EE professionals? Is this within country? In selected institutions? In the region? These options are important to consider because they have cost and impact implications. It is also possible for EEPSEA to continue to be ad hoc in its activities. That is as much a strategy as choosing a few institutions to concentrate deployment of resources.

**d.2). Research strategy.** Based on suggestions from the tracer study, the interviews and the assessment of this review, issues-oriented or theme-oriented small group workshops within the country and eventually within the region will go a long way to making "working groups" work. In addition, recruiting potential and actual research teams for training can pave the way for inter-institutional research collaboration. This can be tried in the in-country program in Vietnam. As the interviewees said: "vertical linkages are better developed than horizontal ones."

The alumni urgently request assistance in publishing their research. Someone suggested that small workshops be held to assist in the transformation of research materials into publishable papers.

Research reviews, by theme or by country, some of which might be done by resource persons are a must to enable budding researchers to stay in touch with the method and substance of EE while they produce their own. Furthermore, such reviews, meta analyses or syntheses bring together evidence (supportive or negative) with respect to policy options and are therefore very useful tools for the alumni as they participate in policy-related activities.

Some research capacity-building programs in other fields choose to build research programs around remarkable individuals because of institutional weaknesses, which will take time and limitless resources to develop. We have seen successful cases of this approach and eventually, the institutional setting also improves.

The "dual window structure" of EEPSEA's research program enables it to be both pro-active and responsive but at some point, it will probably have to be more of one and less of the other. It is usually not an either-or case but rather a mix or a balance which is more realistic. Research on the impact of pesticide use seems to be a common theme which could be one of those policy areas "susceptible" to influence because there is a great deal of public awareness, there is much research

on it, and implementing agencies appear to be open to change. The theme also involves more than one country.

**d.3). Strategy to enhance public awareness and policy influence.** All of the research reports mentioned agencies from where data were obtained and national bodies who are responsible for policy-making in particular environmental issues. All of the reports also mention recommendations for policy and action, but it is not clear as to whom the recommendations are addressed. From the Vietnam interviews and from the Singapore workshop presentations, some, not all mentioned attempts to involve such agencies, communities, and local/national bodies in the research project or at the very least to inform them about the results of the research. Current research ethics requires that such be done especially for those people whose lives are affected. Better yet, they should participate or at least be consulted or be informed about the research. The concept of common good also means that people in whose name we do research must ultimately benefit not only the researchers. In this regard, the researchers who did the study on entrance fees for national parks said they presented the results to managers of National Parks in Vietnam and found them receptive.

- It must be a requirement that results of all research projects supported by EEPSEA be shared with relevant communities and agencies, and if possible, they should participate at different stages in the research process. This would facilitate the policy influence and broaden "ownership" of the research.
- Each research project must define specific target audiences which researchers do find out in the course of the research. All of them should receive copies of the policy briefs and if they are interested, they could ask for the full reports. Some illustrative examples of this suggestion are as follows:

Yun Ping's research report on "The Pollution Charge System in China: An Economic Incentive" mentioned at least 4 relevant agencies: Environment Protection Bureau (the enforcer of the Pollution Charge System), Local Environmental Protection Bureau, Industrial Bureau, Financial Bureau, etc. These agencies should be target audiences in addition to the general public and environmental NGOs.

Another example is the Philippine Mine Safety and Environment Association which could be a target audience for Danilo Israel's report on Small-Scale Gold Mining in the Philippines and for Eugenia Bennagen's Estimation of Environmental Damages from Mining Pollution. These examples can be multiplied for every research project. But the absolute

bottom-line should be the affected communities as a priority target audience.

- Seminars and site-visits for journalists in-country could be less costly than the regional workshop held with AMIC and it would be easier to monitor whether any media reporting resulted from EEPSEA's investment. Eventually, promising and more environment-inclined individuals could be chosen for continuing interactions.
- EEPSEA must capture through case studies "stories" of policy influence and disseminate them widely. They will inspire environmental economists to pursue their own "stories" and will give the public a sense of hope. The 1998-1999 Annual Report of EEPSEA mentioned 3 such promising cases: Sitanon Jesdapipat's report on pricing of water and electricity from small scale dams in Thailand's forest areas - an option that could provide incentive for local communities to manage the forest sustainably; Sunil Chandrasiri's project on cost-effectiveness of measures to reduce automotive pollution in Colombo; and of course, *Indonesia's Fire and Haze Damage* edited by David Glover and Timothy Jessup.

These case studies should highlight how the research contributed to policy influence and lessons from the experience. An excellent example of such analysis is provided by the International Health Policy Program in its paper on "The Contribution of Policy Research to Improving Health Care for China's Rural Poor: Research-based Policy Recommendations and Policy Decisions." As David Gwatkin puts it: "While the publication deals specifically with China, its principal conclusion is highly relevant for work elsewhere as well." The conclusion is that:

*"The researchers influenced policy not simply because of the scientific value and relevance of their findings. Equally important was the care with which they packaged and publicized their findings, and the diligence with which they worked for the adoption of a policy based on them."*

Gwatkin adds that:

*"Such a conclusion indicates that it would be naïve to expect such research findings will inevitably sell themselves. It suggests that researchers who want to influence policy not only need to do good research, but must also be prepared to work hard to get their findings taken into account during the policy formulation process."*

**d.4). Networking strategy.** The idea of national associations of environmental and resource economists in each major country is a good one for in-country networking. The working groups around a common theme or research problem are also mechanisms for networking but they must have a substantive reason for getting together. It is not networking for the sake of networking.

At the regional level, the common interest in pesticide impacts on health and the environment could further enhance the Vietnam-Philippines-Thailand-Laos-Cambodia connections. But other common research problems could also emerge. The only caution is that networking has a high transaction cost.

Electronic networking offers an exciting possibility provided everyone is electronically wired for it.

Hub and spoke relationship in networking are common but the rim effects are more challenging, i.e., relationships between and among individual researchers and countries rather than between EEPSEA and the researcher or the country.

**d.5). Partnership strategy.**

- The CGIAR Centers are major potential partners for EEPSEA. There are very natural convergences with EEPSEA in their natural resource management resource agenda. Examples of such naturally-occurring common interests are: pest management of IRRI and CIP; ICRAF's studies of private and social profitability of major land-use systems in lowland Sumatra under the Alternatives to Slash-and-Burn program; forest management schemes of CIFOR; water management schemes of IWMI; approaches to upland development of CIAT; etc. The ICRAF studies involved Indonesian research teams that could have EEPSEA inputs.

How can such partnerships be forged? EEPSEA can learn from the Rockefeller Foundation Post-doctoral Research Fellowships in the Social Sciences that fielded social scientists in the Centers' research projects. This program contributed in a major way to the Centers' acceptance not only of economists but also of anthropologists and other social scientists. Another possibility is for doctoral field research; research associates; other graduate students under the supervision of Center scientists. An attractive feature of research done within the Centers is that environmental economists will have to work with bio-physical scientists who will scrutinize the natural science assumptions economists make. This partnership can be mutually beneficial

especially because the CGIAR is contemplating a more focused program on natural resource management issues. The economics of this NRM focus is going to be terribly important and the capacity to do this is not always available in the quality and quantity required.

- Another possible partnership for training and research support is with the International Foundation for Science. Some inquiry into this with IFS has been started but this needs to be pursued in greater detail with the Director and Staff in Stockholm.
- There are World Bank and ADB loan projects in country, which often require the skills of environmental economists. The prospects of doing research with funding from these projects could be explored.

### **3. Activities or audiences where EEPSEA should not be active**

- As mentioned earlier, the Los Baños Course should be suspended temporarily to give way to other initiatives. The need for the course in its present format could be reexamined two years from now.
- The biannual workshop should also be revisited to determine whether another way of achieving similar objectives could be found. One thought that comes to mind is to have a regional conference once in two years where EEPSEA and some non-EEPSEA researchers could present papers which will be commented on by assigned discussants. A few international experts could be invited to be plenary session speakers and someone, preferably from the region, could be the keynote speaker. Announcements about the conference will be made more than a year in advance; program committee selected; and co-sponsors identified. Partner organizations could co-host the conference. Paper abstracts will be submitted in advance and the committee selects which one will be presented orally or in posters. Such a regional conference will give high visibility to EEPSEA. Researchers will really have a chance to present to a professional audience. Awards could be given to best papers. This might also be the occasion to recognize journalists who have excelled in reporting about environmental economics research.
- Partnerships have to be reviewed for the benefits EEPSEA derives from them. Non-beneficial relationships could be dropped and more productive ones developed.
- In terms of the research agenda, EEPSEA could look at climate change as an item which might be given a lower priority. There are many other programs engaged in this field such as the International Geosphere-Biosphere Programme of the International Council for Science.

It is difficult to think of an audience that should be ignored until we have evidences of irrelevance.

### 3. Expectations and indicators for impact over the next 5 years

Because of the untidy and complex problem of attribution, impacts of the program could be more realistically and modestly referred to as contributions of EEPSEA to training and research in environmental economics and to research utilization and policy influence in the Region. Contributions can come in many ways and assessed using relevant indicators.

- a. Contributions to the body of knowledge in environmental economics in terms of substance and method (qualitative as well as quantitative)

*Indicators:*

- Publications (local/national, regional, international)
- Citations from such publications
- Awards received by researchers
- Number of research projects (national and regional)
- Case studies developed on research policy influence

- c. Contributions to public awareness

*Indicators:*

- Media reporting of environmental economics research and relevant events
- Visits to EEPSEA's website
- Invitations to EEPSEA alumni and staff to present papers, give seminars and other public presentations

- c. Contributions to the policy influence and program development process

*Indicators:*

- Participation of EEPSEA alumni in committees, task forces, and other similar bodies concerned with environmental problems;
- Leadership of EEPSEA alumni in environmental economics issues;
- Use of EEPSEA research outputs as inputs into policy and program development;
- Adoption of policy instruments coming from EEPSEA research.

- c. Contributions to the development of environmental economics as a field of study in the Region

*Indicators:*

- Number of university courses instituted;
- Number of university curricula developed and offered;
- number of students taking the courses at different degree levels;

- number of short courses offered and trainees who attended;
- number of active researchers.

c. Contributions to networking

*Indicators:*

- Number of collaborative research projects between agencies in one country and between countries on a common theme;
- Number of activities carried out by different groups on their own initiative, even if supported by EEPSEA

If these dreams are to come true, EEPSEA must augment its staff. Two suggestions might be considered in this connection:

- Explore partner organizations' and sponsors' willingness to second staff to EEPSEA to perform some of the functions outlined in the review;
- Choose EEPSEA associates in each country to monitor activities and events relevant to EEPSEA's program.

Many of the indicators mentioned above can only be captured if EEPSEA develops, maintains, and updates, a database on its trainees, grantees, research projects, curricula, courses, cost, etc. This database should be as comprehensive as possible. For example, research grantees should periodically submit details about their publications, participation in committees, changes in positions, etc. EEPSEA associates should be able to monitor alumni status and whereabouts even via the "grapevine".



## SUMMARY AND RECOMMENDATIONS

“To assess the appropriateness of EEPSEA’s modus operandi in promoting the utilization of research results and to suggest ways in which utilization and policy impact might be further enhanced”, this 1999 EEPSEA Evaluation Report examined the following:

- Results of the August 1999 tracer study of recipients;
- The range of activities proposed in EEPSEA’s Program of Work;
- Areas of specialization or comparative advantage for EEPSEA;
- New audiences or partners for EEPSEA’s work;
- Activities or audiences where EEPSEA should not be active;
- New activities;
- Reasonable expectations and indications for impact over the next five years.

The findings may be summarized as follows:

1. The tracer study showed not only very positive utilization but also of “multiplier effects” of EEPSEA training research and other support services. Because most of the respondents are from academe, it is predictable that the utilization will be related to their teaching functions followed by research. EEPSEA has stimulated more learning and more research in the fields of environment and economics. Much less predicted but has nevertheless occurred is the fact that alumni had contributed much to local/national meetings and even to use of research results by local authorities. Through their part time participation in environment-related program and policy-making bodies, they have made inputs into the policy-formulation and implementation process. Additional benefits from the association with EEPSEA were acknowledged by 78 percent. Besides improved knowledge and skills and the resulting self-confidence; much value was placed on networking opportunities; access to information; exposure to great resource persons; and career advancement through their newly-acquired “expert” status. Regarding ways EEPSEA could assist them to achieve greater impact from their work majority were asking for more of the things they were provided before such as: more training; research grants; travel to conferences; information; etc.
2. Regarding EEPSEA’s Program of Work until 2001, this report endorses strongly the deepening of environmental economics in member countries including media-outreach in-country. This report also concurs with the temporary suspension of the Regional Course and strongly suggests that the concept, format, and objectives of the biannual workshop particularly the plenary sessions, the working

group workshops be revisited. Any savings that can be affected from these suggestions could be used to hire EEPSEA associates in-country to increase the capacity of the Secretariat Staff to meet the new demands of the program. The lack of a good up-dated database on EEPSEA's participants and activities is a reflection of this need to augment staff.

3. EEPSEA is a unique program in environmental economics and as far as we know, the only one which occupies this niche in the Region. The challenge is to institutionalize environmental economics in the Region without being there forever. EEPSEA has created its own comparative advantage and should try to get as much mileage from its investments as possible.
4. EEPSEA is past the age of simplicity. Through its actions and "menu of activities" there is tacit evidence that EEPSEA includes in its mission – the promotion of research utilization and policy impact. This goes beyond the understated objective of "supporting training and research in environmental and resource economics in the Region." This expanded mission should be articulated in a more explicit strategy. In real life the ideal of trade-off between research/teaching skills and achieving policy impacts is probably not a trade-off but a dual demand. This is something researchers must learn and be exposed to. The experience in Vietnam illustrates this eloquently because the alumni have been drawn into the "policy influencing process." They have become the country's "experts" in environmental economics.
5. The EEPSEA strategy has 5 identifiable components:
  - Training strategy and institutionalization of environmental economics in the region;
  - Research Strategy;
  - Strategy to enhance public awareness and policy influence;
  - Networking Strategy;
  - Partnership Strategy.

These components are not mutually exclusive. They are interdependent; they reinforce of each other and if pursued coherently could contribute more cost-effectively to EEPSEA's mission.

3. New activities recommended for each component of the Strategy include the following:

- Unless EEPSEA chooses to proceed on an ad hoc basis, EEPSEA should identify potential resource institutions in the Region, which will receive more intensive attention. They will be the focal points for the institutionalization of environmental economics;
  - The research strategy could consider theme-oriented small group workshops nurtured to make "working groups" work;
  - Alumni need assistance in publishing their research and suggest workshops for this purpose;
  - Research reviews will enable budding researchers to keep abreast of the field and will provide useful tools for their policy-related activities;
  - EEPSEA's current research program which is both pro-active and responsive will probably have to be more of one and less of the other but not either-or;
  - For public awareness and policy influence, results of research supported by EEPSEA should be shared with relevant communities and agencies. This would facilitate the policy influence and broaden "ownership" of the research. Each research project must define specific "target audiences" but affected communities must be a priority. Seminars and site visits for journalists in-country could be less costly and their impact easier to monitor. EEPSEA must capture through case studies, "stories" of policy influence and disseminate them widely;
  - Networking can come through national associations of environmental economists; working groups around a common research problem, both nationally and regionally. But there must be a substantive reason for networking, because networking has a transaction cost. The "rim effect" must be developed in networking, not just the "hub and spoke" relationship between EEPSEA and its recipients. As one respondent put it: "EEPSEA is a significant *GATE* for Southeast Asian researchers to connect effectively to academic and research activities in environmental economics within the region and the world;"
  - Partnerships with several of the CGIAR centers should be explored because there are natural convergences with the latter's natural resource management research agenda. Such partnerships could be mutually beneficial. Another possible partnership for training and research support is with the International Foundation for Science in Stockholm. The prospects of doing research within environmental loan projects from the World Bank or ADB should likewise be examined.
3. In terms of activities in which EEPSEA should not be active, the Los Baños Course should be suspended temporarily to give way to other initiatives. The biannual workshops should be revisited for possible

changes. A regional conference every two years might be considered as an opportunity for environmental economists (EEPSEA and non-EEPSEA) to present papers professionally. This could be a "coming-out party" for EEPSEA alumni and an occasion for outstanding journalists in environmental economics reporting to be recognized. Existing partnerships have to be reviewed and non-beneficial relationships should be dropped.

At the moment it is difficult to think of audiences EEPSEA should ignore.

4. Expectations and indicators for impact over the next 5 years should focus on EEPSEA's contributions rather than EEPSEA's impact. The problem of attribution is difficult and complex, hence it is more realistic to refer to contributions which come in many ways with appropriate indicators:
  - contributions to the body of knowledge about environmental economics in the region;
  - contributions to public awareness;
  - contributions to the policy influence and program development process;
  - contributions to the development of environmental economics as a field of study; and
  - contributions to networking

Many of the indicators outlined for the above-mentioned expectations can be captured only if EEPSEA develops, maintains, and updates a database on its trainees, research and other activities. This would require an increase in EEPSEA's Secretariat. For this and other purposes, EEPSEA should consider secondment of staff from partner organizations and the hiring of EEPSEA associates in-country.

## CONCLUSION

Although there is a long and often tortuous distance between training and research in environmental economics and policy influence, EEPSEA has started the trek. Finding market-based instruments in particular institutional settings is one clear path enroute to mending the Good Earth. In the process, the significance of our COMMON GOOD unfolds and the challenge to OUR COMMON FUTURE ceases to be simply academic. EEPSEA as a program where the science community provides the "empirical and knowledge base" to address environmental problems has definitely begun to make its contributions toward this human purpose.

**Persons interviewed in Hanoi, Vietnam: August 23-27, 1999**

1. Mr. Tran Quy Hung  
Director General  
Plant Protection Department  
Ministry of Agriculture and Rural Development
2. Mr. Dam Quoc Tru  
Deputy Director General  
PPD, MARD
3. Mr. Truong Quoc Tung  
Director  
PPD of Vinh Phuch Province
4. Dr. Pham Van Lam  
Vice Director  
Biological Control Research Center  
(Entomologist)
5. Mr. Dang Van Minh  
Gave a seminar on their EEPSEA research  
"Impact of Agro-chemical Use on Productivity and Health in Vietnam"  
(Ph.D. student in Saskatchewan, Canada)
6. 20 staff members from 5 different agencies attended the seminar:
  - National Institute of Plant Protection
  - Department of Science and Technology (Product Quality)
  - Department of Agricultural Policies
  - Department of Agricultural Extension
  - Northern Pesticides Control Center (PPD)
3. Mr. Nguyen Van Song  
Faculty of Economics and Rural Development  
Hanoi Agricultural University
4. Mr. Pham Van Hung  
Faculty of Economics and Rural Development  
Hanoi Agricultural University
5. Mr. Tran Dinh Thao  
Faculty of Economics and Rural Development  
Hanoi Agricultural University

6. Dr. Truong Quang Hai  
Dept. of Landscape Ecology and Environment  
Faculty of Geography  
Hanoi Agricultural University
7. Mr. Pham Thai Hung  
National Economics University  
Hanoi, Vietnam
8. Mr. Nguyen Thi Hai  
Dept. of Landscape Ecology and Environment  
Hanoi National University of Natural Sciences
9. Mrs. Do Thi Huyen  
Embassy of Sweden  
National Program Officer
10. Dr. Agnes Rola  
Resource Person for the Research Project on "Impact of Agro-chemical Use  
on Productivity and Health in Vietnam"

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# ANNEX

## SURVEY RESULTS

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**Tracer Study:** These tables present the results a survey that asked recipients of EEPSEA grants to describe the impact of EEPSEA support on their work. The questionnaire was mailed to all recipients of research or training awards since EEPSEA's inception in May 1993. A total of 231 questionnaires were mailed; 73 were returned in time for processing. Given that some of the addresses were more than six years old, it is not known how many questionnaires actually reached the addressee.

**Assessment Survey:** These tables present the results of a mail survey that asked people with first-hand knowledge of EEPSEA to assess the quality of EEPSEA's services and outputs. The questionnaire was mailed to all those who had attended an EEPSEA biannual workshop between October 1996 and May 1999 (roughly the period of this evaluation). A total of 148 questionnaires were mailed; 46 were returned.

**Assessment of Annual Regional Course, Los Banos:** The table presents the results of three surveys: one for each year the five-week course has operated so far (1997/98/99). The course covers environmental and resource economics, in five modules. The survey was administered in person to participants during the courses; responses were received from all 85 respondents.

Presented here is a summary of the assessment results. The surveys included ratings for each instructor and run to about 20 pages each year, or 60 pages in total. They have been omitted in the interest of brevity but are available on request.

**Assessment of Pollution Control Course:** This shows results from a survey of all 22 participants at the December 1999 course on the physical science of pollution control. The five-day course was designed to give EEPSEA economists a grasp of technical material and covered sources of pollution; their principle effects; setting of standards; and technologies for pollution control.

Presented here are summaries of the assessment results. The surveys included ratings for each instructor and run to about 12 pages. They have been omitted in the interest of brevity but are available on request.

## ANNEXES

### Annex A. Additional courses related to environment or economics taken after exposure to environmental economics through EEPSEA.

<b>A. Vietnam</b>
<i>a. Specific courses mentioned</i>
1. Sustainable agriculture in the uplands organized by SEAMEO/SEARCA (Philippines)
2. Training of trainers in Agroforestry (Chiang Mai)
3. Agricultural Policies Workshop on Financial Aspects of Cleaner Fossil Power Generates in Asia (JICA organized)
4. Environmental Valuation: Theory, Techniques, and Application (London)
5. Ecological Economics (University of British Columbia)
6. Beijer Teaching Workshops in Malaysia and U.S. (ecological economics)
7. Market's and Vietnam's Transition into the Global Economy (organized by Georgetown University in Ho Chi Minh City)
8. Ph.D. Course on Environmental Economics and Policy Making (Sweden)
9. Environment Protected by Farming Systems in Highland and Sloping Land
10. International Conference on Making ASEAN a community of Nations with Sustainable Development, Equality, and Cooperation
11. Asia Pacific Regional Workshop on Financial Mechanism (organized by UNDP)
<i>b. General courses mentioned</i>
1. Sea and Coastal Resource Management
2. Environmental Planning and Management
3. Ecosystem of Mangroves
4. Natural Resource Management and Rural Development
5. Co-management in Fishery
6. Biodiversity
7. Ecology
8. Wetlands
9. Gender and Environment
<b>B. Philippines</b>
1. Post-doctoral Training in Environmental Economics and Policy (U.S.)
2. Public Policy Forum (Sessions on Environment and Sustainable Forestry) Japan
3. Perspective on Public Policy in the 21 <sup>st</sup> Century (Sessions on Environmental Valuation and Assessment) Singapore
4. Post-doctoral enlistment in the University of British Columbia
<b>C. Thailand</b>
1. Environmental Economics and Policy Making (Sweden)
2. Sustainable Development Fellowship Program (Germany)

<b><i>D. Malaysia</i></b>
1. Environmental Valuation
2. Environmental Economics
3. Ecological Economics

<b><i>E. Sri Lanka</i></b>
1. Harvard University Course in Environmental Economics

<b><i>F. China</i></b>
1. Environmental Economics and Policy Design

<b><i>G. Laos</i></b>
1. Economics Development Experience of Korea
2. Economics Development Experience of Singapore
3. Institutional Options for River Basin Management
4. M.Sc. Course in Industrialization, Trade, and Economic Policies (Scotland)

<b><i>H. Cambodia</i></b>
1. Environmental Statistics

<b><i>I. Indonesia</i></b>
-

Total number of respondents = 25

Total number of responses = 36

**Annex B. Additional research undertaken after exposure to environmental economics through EEPSEA.**

<b>A. Vietnam</b>
1. Action research: Impact of Forestland Allocation in Vietnam in Three Aspects: Ecology, Economy and Social Structure in 3 Pilot Sites
2. New point of view and method on environmental assessment of current environmental situation in Ho Chi Minh City
3. Economic and consequences of Pesticide Use in Paddy Production in the Mekong Delta
4. Impact assessment of socio-economics of Asian Road Project in Vietnam
5. Sustainable management of upland forest resources in Vietnam
6. Sustainable land use in Sonda Province, North Vietnam
7. Environmental problems and methods to control pollution from plants
8. Valuation of sanitation options in Vietnam
9. Environmental impact evaluation
10. Community-based natural resource management in Can Tho Province (IDRC project)
11. Bio-control of insect pests; effects of chemical pesticides on environment including the effect on beneficial insects
12. Community-based resource management in the upland
13. Pre-inception study on sustainable upland development among ethnic minorities in North Vietnam
14. Land allocation and land management in Tan Lac District, Hoa Binh Province
15. Enhance the effectiveness of environmental state management in Tay Ninh Province
16. Comparative analysis of forest management systems in the Mekong Delta
17. Building and developing the stable fishery resources in Kien Giang Province
18. Economic and health consequences of pesticide use in rice production at the Mekong Delta
19. Agrochemicals productivity and health in Vietnam
20. Optimum development and use of underground water in Can Tho Province
21. Optimum management of Can Tho's solid waste
22. Coastal development and management in some provinces
23. Environmental research for development strategy and regional planning
24. Comprehensive planning for some provinces of Vietnam
25. Applying economic instruments to control water pollution in Hanoi
26. Feasibility study for project in environmental sanitation
27. Hunger alleviation and poverty reduction in mountain areas of Vietnam

<b>B. Philippines</b>
1. Clean Air Act Issue and Boracay Island Resort
2. Artisanal mining
3. Early voluntary sectoral liberalization in the fisheries sector
4. Cost-benefit analysis
5. Valuation methods
6. Transaction cost analysis
7. Community-based resource management
8. Financing environment program
9. Chemical application practices of rice farmers
10. Extent of chemical use in rice and corn production
11. Status and value of groundwater in Cagayan de Oro

<b>C. Thailand</b>
1. Potential ecotourism value of Mae Yam National Park
2. Strategic Environmental Framework for the Greater Mekong Sub-region (ADB Technical Assistance)
3. How internalize negative externalities into the production process and to make sure that environmental cost are shared accordingly
4. Using market-based instruments to solve pollution problems in the industry sector
5. Market-based instruments in Thailand for environmental conservation (ADB)
6. Water-pricing schemes and sustainable groundwater use in Thailand (Thai Research Foundation)
7. Citizen participation in Water Resource Management Learning from Japan (Toyota Foundation)
8. Economic and Social Analysis of Forest Management Schemes in Asia (Funding support requested from Japan Foundation)

<b>D. China</b>
1. Economic of Climate Change
2. Economic aspects of pollution control in the Yellow Sea
3. Global warming, carbon cycle
4. China Climate Change Study (China-U.S. project)
5. Tarin Basin Desectification and Water Management (IDRC)
6. GEF/UNDP Asia Least-Cost Green House Gas Abatement Strategy
7. Forest Taxation in China
8. Land Use cover in Europe and North Asia
9. Permits trading feasibility study under Environmental Management Scheme for the Pearl River Basin (a state key project for the 10 <sup>th</sup> five-year plan of China)
10. Chemical use and rice environment in South China (3-year project funded by the National Science Foundation)

<b>E. Malaysia</b>
1. Valuation of Wetland
2. Economic analysis of rehabilitation project
3. External costs of agriculture funded by Ministry of Science and Technology (MOSTE)
4. Natural Resource Accounting funded by MOSTE
5. Total economics valuation of mangrove wetlands (UNEP)

<b>F. Indonesia</b>
1. Air Pollution
2. Water Pollution
3. Marine resource economics
4. Endangered species
5. Agro-environmental health economics
6. Agricultural greenhouse gases emission economics

<b>G. Sri Lanka</b>
1. Shifting cultivation in Sri Lanka
2. Economics of Soil Erosion in mid-country tea cultivation
3. Soil degradation in the dry zone
4. Sustainable management of mud crab production in Sri Lanka
5. Methodological problems with CVM
6. Extended cost-benefit analysis in major irrigation projects in Sri Lanka

<b>H. Laos</b>
1. Economic impact assessment of Nam Theun 2 Dam
2. Analysis of the Lower Mekong Basin Development Planning

<b>I. Cambodia</b>
-

Total number of respondents = 53

Total number of responses = 75

**Annex C. Ways knowledge or skills gained through EEPSEA were used in current jobs.**

<b>A. Vietnam</b>	<b>No. of responses</b>
1. Teaching	15
2. Research	11
3. Guided student research	3
4. Contributed to workshops and seminars	1
5. Participated in writing a book on environmental economics	1
6. Assisted colleagues and/or students in selecting or dealing with research issues in environmental and resource management	3
7. Helped make questionnaire for environment survey	1
8. Helped established Environment Economics Unit in the University	1
9. Helped find research materials for local boards who make rules relating to agriculture and rural development	1
10. Helped me in justifying and selecting development alternatives	1
11. Integrated environmental issues into research and development projects	1
12. Contributed to management of projects which have environmental components	1
13. Assessed environmental damage on public health and agricultural production in one district	1
14. Contributed to start of a new center for Gender, Environment and Sustainable Studies	1
15. Made comments on design of various projects developed by UNDP	1

<b>B. Philippines</b>	<b>No. of responses</b>
1. Teaching	9
2. Research	2
3. Guided student research	3
4. Participated in lectures, workshops for NGOs and other groups	1
5. Shared materials with colleagues	1
6. Incorporated environmental concerns during project evaluation, monitoring and R&D priority-setting	1
7. Used materials to write policy papers	1
8. Evaluated proposed policies like administrative orders and congressional bills	1
9. Used benefit-cost analysis to determine economic efficiency of proposed implementation strategies	1
10. Added new concerns in the setting-up of a revised socio-economic national R&D for CY 2000-2004	1
11. Contributed inputs into US-RP agreement on Transport of hazardous wastes	1
12. Participated in the negotiation on revisions in the draft of the Philippine Clean Air Act which was passed recently	1

13. Made inputs into the formulation of standards for incinerators and dioxide	1
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<i>Thailand</i>	<i>Number of Responses</i>
1. Teaching	8
2. Research	1
3. Policy consultation with government officials	1
4. Wrote chapter on health impacts of air pollution	1
5. Gave two lectures on economic instruments for the Thai Rem Project	1
6. Chair of Environment Economics Textbook fir Master's Program	1
7. Established network	1
8. Organized workshops similar to EEPSEA	1

<i>China</i>	<i>Number of Responses</i>
1. Applied research method, economic evaluation in particular	1
2. Organizational skills applied to coordination of small project team	1
3. International contact were tapped to recommend and select reviewer for third assessment report on climate change and integration policies	1
4. Knowledge and skills used in international research project	1
5. Used environmental economics and policy design for forest resource management project	1
6. Acquired analytical skills and made interdisciplinary linkages	1
7. Acquired letter understanding of the impact of chemical used in China	1

<i>Indonesia</i>	<i>Number of Responses</i>
1. Teaching	5
2. Conducted seminar inviting important policy makers	1
3. Integrated environmental economics in environmental assessment	1

<i>Malaysia</i>	<i>Number of Responses</i>
1. Teaching	2
2. Research and valuation of forest good and services	1
3. Papers from website and research reports were useful references in research work	1
4. Materials were used in proposal and research report writing	1
5. Inputs into consultancies	1

<i>Sri Lanka</i>	<i>Number of Responses</i>
1. Shared knowledge and materials with other resource economists in my department	1
2. Research	2



3. Guided school teachers in environmental improvement program	1
--	---

<i>Laos</i>	<i>Number of Responses</i>
1. Inputs into public investment program plans	1
2. Inputs into project planning, appraising and evaluation	1
3. Inputs into EIA	1
4. Gave advise to colleagues in implementing their jobs	1
5. Made comments in environmental issues in project planning	1

<i>Cambodia</i>	<i>Number of Responses</i>
-	

Total number of respondents = 65

Total number of responses = 112

**Annex D. My association with EEPSEA helped me advance my career in different ways.**

<b>A. Vietnam</b>
1. Full-time national program officer with UNDP
2. Full-time head of project
3. Part-time environment adviser
4. Became lecturer and researcher for the Institute
5. Part-time teaching
6. Full-time teaching and thesis supervisor
7. Assistant at the Centre in the Ministry of Agriculture and Rural Development
8. Leader of environmental economics group on Economy and Rural Development to participate in JICA Conference and JICA project
9. Fullbright scholarship for Ph.D. in the U.S. (2)
10. Research fellowship
11. Consultant for Environmental Economics Training Course
12. Associate Vietnam's National Program on Economy, Energy and Environment
13. Deputy Head, Environmental Economics Unit (School of Economics)
14. Advisory member – SIDA Environment Fund
15. Researcher for EPA-Ho Chi Minh City
16. Chief, Can Tho Environment Monitoring Station
17. Part-time participant in some national and international environmental issues
18. Program officer for Environment – Swedish Embassy
19. University lecturer on environmental economics
20. Part-time research project on agricultural production impacts on the environment
<b>B. Philippines</b>
1. Asked to teach environmental economics
2. Promoted from Research Fellow I to Research Fellow II
3. World Bank consultant
4. Became Senior Technical Assistant to Assistant Secretary for mining
5. Member, Minerals Advisory Council
6. Affiliate staff of Institute of Tropical Ecology
7. Study leader of coastal resource management
<b>C. Thailand</b>
1. Promoted from Assistant to Associate Professor
2. Member, Advisory Board
3. Consultancy contact

<b><i>D. China</i></b>
1. Senior Program Officer Adviser on Energy and Environment (UNDP)
2. Member of expert group, State Environment Protection Agency
3. Council member, Chinese Society for Sustainable Development
4. FAO Regional Project Facilitator
5. Committee member, Chinese Society of Water Environment
6. Tech-scientific pioneer at level III of Yunan Province
7. Obtained position at centre for Chinese Agricultural Policy
8. Promoted to full professor

<b><i>E. Indonesia</i></b>
1. Part-time lecturer
2. Associate Professor in Resource Economics

<b><i>F. Malaysia</i></b>
1. Researcher at FRIM
2. Part-time teaching at the University
3. Panel member of the EIA
4. Member, Technical Advisory Panel, FRIM

<b><i>G. Laos</i></b>
1. Promotion from Division Chief to Deputy Director General
2. Planning Analyst for Basin Development Plan of Mekong

<b><i>H. Sri Lanka</i></b>
1. Representative to Water Resource Secretariat Irrigation Department
2. External Examiner for Agricultural Economics and Environmental Economics
3. Invited to be a member of Presidential Committee on SAFTA/SAPTA but did not participate

<b><i>I. Cambodia</i></b>
-

**Annex E. Additional benefits or impacts from association with EEPSEA.**

<b>A. Vietnam</b>	<i>Number of Responses</i>
1. Better contact and able to network with more people and made friends with professionals working on environmental issues in the Region and even in our country	10
2. Access to knowledge, new information, research findings, publications and web-site	8
3. Improved knowledge and research skills	8
4. New research opportunities and research collaboration	2
5. More comprehensive approach in solving environmental issues in different regions of Vietnam	2
6. Became more self-confident in natural resource and environmental economics issues	3
7. Able to obtain feedback about my research	-
8. Improve understanding of environment and socio-economic issues	2
9. Shared materials, computer, internet, information with colleagues	-
10. Developed international linkages	2
11. Great learning experience from exposure to well-known experts	2
12. Gained experience in obtaining research grant and implementing research project	2
13. EEPSEA is a significant GATE for Southeast Asian researchers to connect effectively to academic and research activities in environmental economics within the region and in the world	1

<b>B. Philippines</b>
1. Newsletter updates me on current issues
2. Use of web-site
3. Access to literature and references needed in my research (3)
4. Improved networking with other researchers (4)
5. Improved presentation skills
6. Increased participation in conferences and training
7. Recognition from office and others on my skills gained from EEPSEA training
8. Became more confident in discussing natural resource and environmental economics issues
9. Networking with top/well-known specialist in environmental economics
10. Just being exposed to extremely knowledgeable resource persons/ researchers who are so generous with what they know and who are sincere in doing something good for the environment is already a great benefit in itself
11. Hope to contribute to policy making
12. Obtained valuable feedback in a collegial environment for my research
13. Learned and picked up more ideas for potential research
14. Understood things better from different perspectives

<b>C. Thailand</b>
1. New contacts with people in environmental economics (4)
2. Access to information via WEB or through Dr. Glover (2)
3. Helped me to get a consulting job at International Environment Management Co. Ltd.
4. More knowledge and training enabled me to be referred to as an expert
5. Provided excellent resource persons (2)
6. Provided new ideas and examples which are more relevant to Asia
7. Enhanced my undertaking and interest in the subject
8. Experience with EEPSEA will help me work with Thai Research Foundation because process is similar

<b>D. China</b>
1. EEPSEA research will be useful to improve quality of research in my institution
2. More contacts with other environmental economics people (4)
3. Opportunity to present research and obtain feedback
4. Shared information and materials with colleagues to enhance research capacity of research unit (2)
5. International links developed

<b>E. Indonesia</b>
1. Better contacts with other environmental economists (3)
2. Access to new information
3. Know better research issues in environmental economics in ASEAN
4. International links

<b>F. Malaysia</b>
1. Enabled me to serve as a resource person in various short courses
2. More students will take graduate studies in environmental economics
3. Source of referee/recommendation to interested parties particularly international institutions
4. Links with other Southeast Asian researchers in environmental economics
5. Important for World Wildlife Fund capacity building and potential source of support
6. Partial and full financial support for overseas seminar and paper presentation

<b>G. Sri Lanka</b>
1. Acquired more competence in post-graduate research methodology course
2. Became advisor to school environmental project in Kandy

<b>H. Laos</b>
1. Able to understand better the impact of socio-economic development on the environment
2. Working with international experts became easier

Total number of respondents = 57

Total number of responses = 101

**Annex F. Ways EEPSEA could assist to achieve greater impact from my work.**

<b>A. Vietnam</b>
1. Provide information on recent researches or at least a summary of these researches
2. More technical and financial support
3. Invite me to a biannual workshop
4. Offer more training on environmental policy
5. Help me, when I asked for comments or documents for my research
6. Support future research
7. Provide more books and materials on environmental economics
8. Support further research
9. Keep the network
10. Send research publications of EEPSEA and the Journal of Environmental Economics and Management
11. Send newsletter regularly and information about environmental economics in the Region
12. Do research in collaboration with policy makers in a national level project
13. Create and allow participation in a network of researchers
14. Provide regular information about network
15. Distribute working papers regularly
16. Support for research on impact of transgenic plants on the environment (e.g. beneficial insects)
17. Provides new documents in environmental economics
18. More materials and new publications to help in my teaching
19. Send newsletter and publications
20. Support research
21. Provide materials on research results
22. Assist in attending meetings and training
23. More documents about environmental state management specially organizational structure of central and local authorities of some countries which Vietnam can refer to
24. Continue contact with EEPSEA in academic support
25. Attend workshop and training on environmental economics
26. EEPSEA could assist me to implement the project: Research for Optimum Management and Development of Hau River's Resources of Can Tho and related provinces
27. Network, newsletters, information
28. Follow-up activities will make the course more useful for all participants
29. More support for materials and sending me to workshops and conferences

<b>B. Philippines</b>
1. More materials and references
2. Advisory assistance from EEPSEA
3. Copies of EEPSEA reports relevant to my work
4. Financial assistance
5. New research funding
6. Provide funds for post-doctoral work
7. Provide opportunities for interaction and linkaging
8. Actual exposure or correspondence with experts on alternative control options for hog waste disposal
9. Publications and newsletters
10. Training, workshops and conferences
11. Joint activities in areas of common concerns
12. Updates on state-of-the-art in environmental economics
13. EEPSEA could serve as a broker to match projects with researchers or researchers with projects
14. Help us look for funds to support projects

<b>C. Thailand</b>
1. EEPSEA may assist in arranging for the researcher to work with technical international advisers instead of the regional ones. Regional advisers lack knowledge regarding the technical stuff in the literature.
2. Want to attend a short course in environmental tax (theory and practice) need to get information from other sectors in some countries where the environmental tax has been implemented.
3. Provide some advance courses in natural resource and environmental management
4. Provide consultation services related to environmental economics like question and answer in an Information Center
5. Want to see more of my colleagues participate in EEPSEA
6. Environmental economics dictionary in Thai needs support for typing and copies. Two publishing companies offered to publish dictionary as well as the textbook on environmental economics

<b>D. China</b>
1. Communicate directly with head of institution reporting research program and ask head for support
2. Encourage participation in conferences by providing information and financial support
3. Helped in English editing for the publication of paper
4. Information exchange, workshop attendance and collaborative research
5. Chinese Environment Society Press has approved publication of EEPSEA Report with some modification in both Chinese and English but this was postponed due to lack of funds. Can EEPSEA provide financial support?

<b>E. Indonesia</b>
1. Maintain our relationship even after contract with EEPSEA
2. Promote research findings
3. Send research papers

<b>F. Sri Lanka</b>
1. Helped in the publication of EEPSEA study
2. Lost contact with reviewer of my draft report submitted for publication
3. Opportunity to work in the area of CGM modeling to expand my research activities

<b>G. Malaysia</b>
1. Fund research projects
2. Give travel grants
3. Organize workshops to help researchers to convert research materials into publishable papers in international journals
4. Support and organize more joint researches in special theme such as Forest Fires and Haze, Resource Accounting
5. Suggest economic instruments to ASEAN to help tackle issue of forest fires
6. Developed a data base of EEPSEA researchers and their fields of interest to facilitate information exchange

<b>H. Laos</b>
1. Send books and other materials on natural resource use and environmental protection, economic development and planning
2. Give me short training in project management and English training related to ASEAN business affairs
3. More training courses are needed to upgrade knowledge

Total number of respondents = 57

Total number of responses = 69



# Annex G. Tabular Materials

**Table 1. Types of jobs/position held by EEPSEA participants who returned the questionnaire.**

Country	Academic/ University	Type of job		Country Program Office of International Organization	Agriculture, R&D Coordinating Office
		Ministry or Government Dep't.	Policy Making Body		
Vietnam	20	6		3	
Philippines	10	1		-	1
Thailand	10	-	-	-	-
China	10*				
Indonesia	5				
Malaysia	2			1	
Sri Lanka	3				
Laos	-	-	2	-	-
Cambodia	-	1	-	-	-
Total	60	8	2	4	1

\* Includes information from 2 e-mails

**Table 2. Respondents Who Made Use of Knowledge from EEPSEA's Training, Research or Reading Materials.**

Total number who returned the questionnaires	Percent of Total Respondents									
	Vietnam 29	Philippines 12	Thailand 10	China 8	Indonesia 5	Malaysia 3	Sri Lanka 3	Laos 2	Cambodia 1	Total 73
1. Started a new university course	13	2	3	-	2	1	-	-	-	21
2. Taught an existing university course	10	8	4	3	3	2	1	-	-	31
3. Offered a short course	12	3	3	-	1	2	1	-	-	22
4. Wrote a textbook or other publication	7	3	7	2	1	3	-	-	-	23
5. Translated a textbook into a local language	7	-	-	-	-	-	-	-	-	7
6. Contributed to an international meeting or negotiation	10	5	2	1	1	1	3	1	-	24
7. Contributed to a local meeting or negotiation	15	8	5	4	2	2	2	2	1	41
Total No. of responses										169

**Table 3. Number of Respondents Who Replied to Different Questions in the EEPSEA Impact Questionnaire.**

Total number who returned the questionnaires	Vietnam 29	Philippines 12	Thailand 10	China 8	Indonesia 5	Malaysia 3	Sri Lanka 3	Laos 2	Cambodia 1	Total 73	Percent of Total Respondents
1. My exposure to environmental economics through EEPSEA led me to take additional courses related to environment or economics	14	3	2	-	-	2	1	2	1	25	34
2. Respondents who reported about the use of results from their EEPSEA Research Project	21	5	6	6	3	2	3	-	-	46	63
3. My exposure environmental economics through EEPSEA led me to undertake additional research in this area	23	8	7	6	3	2	3	-	-	53	73
4. My association with EEPSEA helped me advanced my career by obtaining positions including full-time/part-time, advisory boards, etc.	17	5	4	7	2	2	2	1	-	40	55
5. I have used knowledge or skills gained through EEPSEA in my current job in different ways	27	11	10	5	4	3	3	2	-	65	90
6. My association with EEPSEA had additional impacts or benefits	23	9	9	6	4	3	1	2	-	57	78
7. These are ways EEPSEA could assist me to achieve greater impact from my work	27	7	7	6	3	3	2	2	-	57	78

Table 4. Number of Respondents Who Reported Use of Results from their Research Projects.

Ways research results were used	Vietnam 21	Philippines 5	Thailand 6	China 6	Indonesia 3	Malaysia 2	Sri Lanka 3	Laos -	Cambodia -	Total 46	Percent of Total Respondents
1. Presented at a local/national conference	13	3	6	5	3	2	3	-	-	35	48
2. Presented at a regional/international conference	7	2	4	3	2	2	1	-	-	21	30
3. Presented to local policy-makers in a seminar	9	5	3	5	1	2	3	-	-	28	38
4. Published in a journal	4	2	4	4	2	2	1	-	-	19	26
5. Quoted in another publication	2	1	-	2	-	2	1	-	-	8	11
6. Cited in the media (newspaper, television)	2	1	2	-	-	1	-	-	-	6	8
Total No. of responses										117	
Ways research results were used by local authorities											
1. To launch an implementation project	7	-	3	3	-	-	1	-	-	14	20
2. To change legislation, regulations or institutional arrangements	3	-	1	1	-	-	-	-	-	5	7
3. To institute a fee or tax to finance environmental improvement	2	-	3	1	-	1	-	-	-	7	10
4. To start an inquiry or feasibility into doing one of the above	4	3	3	1	1	-	1	-	-	13	17
5. I was invited to participate in a committee or task force	6	3	2	3	3	1	2	1	-	21	30
6. I was consulted at different times or on other issues	10	3	2	4	1	1	-	-	-	21	30
Total No. of responses										81	

**Table 5. Ways knowledge and skills gained from EEPSEA were used in current job.**

	No. of Responses*	Percent of Respondents
1. Teaching	49	67
2. Research	28	38
3. Inputs into development program and policy making	29	39
4. Institution building	6	8
Total responses	112	

Total number of respondents to this question = 65

\*Total number who returned questionnaire = 73

**Table 6. Career advancement obtained through help from association with EEPSEA.**

	No. of Responses	Percent of Respondents
1. Promoted to higher position	8	11
2. Obtained new full time job	4	6
3. Part-time participation in research projects of teaching	18	25
4. Part-time consultancy, membership in committees, technical panels, advisory bodies	20	28
5. Obtained scholarship for further study	2	4

Number of respondents to this question = 40

Total number who returned questionnaire = 73

**Table 7. Additional benefits or impacts from association with EEPSEA.**

	No. of Responses	Percent of Respondents
1. "Networking" (opportunity to meet other people in environmental economics in Southeast Asia and elsewhere)	23	32
2. Access to information	21	30
3. Improved knowledge and research skills	28	38
4. More career opportunities	10	14
5. International links	5	7
6. Able to present research and obtain feedback	3	4
7. Institutional development	2	3
8. Learned from great resource persons	7	9
9. Gained experience from obtaining grant and implementing research project	1	2
10. Obtained financial support to attend seminar and present paper overseas	1	2
Total Responses	101	

Number of respondents to this question = 57

Total number who returned questionnaire = 73

**Table 8. Ways EEPSEA could assist to achieve greater impact from my work.**

	No. of Responses
1. Provide more information, publications on research findings, research reports, books, working papers, newsletter	22
2. Keep the network for continuing exchange	6
3. Technical and financial support for research	15
4. More training, invitations to workshops, conferences	12
5. Assist in getting research published	6
6. Joint research and other activities in areas of common concerns (common theme)	4
7. Data-base of EEPSEA researchers and their fields of interest to facilitate exchange	1
8. Do research in collaboration with policy-makers at the national level	1
9. Follow-up activities to make course more useful to participants	1
10. EEPSEA could serve as a <u>broker</u> to match projects with researchers or researchers with projects	1
Total no. of Responses	69

Number of respondents to this question = 57

Total number who returned questionnaire = 73

## EEPSEA Assessment Questionnaires

**Number of total questionnaires: 46**

**Attendance at training courses**

Yes: 22      No: 23

**Attendance at EEPSEA biannual workshops**

An average of 2.7 workshops attended by participant. (124/46 questionnaires )

**Attended as:** Researcher: 30      Other: 13      Both: 2

### **1. Research and Training**

**a) My involvement in EEPSEA has improved my research and analytical skills.**

strongly disagree (1)	2	3	4	Strongly agree (5)	N/A
0	0	1	18	20	7

(total number of responses: 46)

**b) My involvement in EEPSEA has improved my teaching and training abilities.**

strongly disagree (1)	2	3	4	Strongly agree (5)	N/A
0	2	7	8	19	10

(total number of responses: 46)

### **2. Interdisciplinarity and International Links.**

**a) EEPSEA has helped me to become aware of, and forge interdisciplinary links.**

strongly disagree (1)	2	3	4	Strongly agree (5)	N/A
1	4	1	12	27	1

(total number of responses: 46?)

**b) EEPSEA has improved my network of international contacts**

**(i) by exposing me to researchers/experts from other countries.**

strongly disagree (1)	2	3	4	Strongly agree (5)	N/A
0	1	5	9	30	1

(total number of responses: 46)

**(ii) by disseminating my results abroad.**

strongly disagree (1)	2	3	4	Strongly agree (5)	N/A
0	2	3	10	21	9

(total number of responses: 45)

### **3. Biannual Workshops**

**a) Overall, the biannual EEPSEA workshops have been useful to me.**

strongly disagree (1)	2	3	4	Strongly agree (5)	N/A
0	1	1	13	31	0

(total number of responses: 46)

**b) The plenary sessions at the workshops address the right types of issues.**

strongly disagree (1)	2	3	4	Strongly agree (5)	N/A
0	1	7	18	19	1

(total number of responses: 46)

**c) The workshops achieve the right balance**

**(i) Between micro/project and macroeconomic/sectoral issues.**

strongly disagree (1)	2	3	4	Strongly agree (5)	N/A
0	2	7	22	15	0

(total number of responses: 46)

**(ii) Between theory (what methods to use and why) and practice (how to apply tools).**

strongly disagree (1)	2	3	4	Strongly agree (5)	N/A
0	3	4	19	20	0

(total number of responses: 46)

**f) The literature in environmental economics provided on the “paper table” is useful to me.**

strongly disagree (1)	2	3	4	Strongly agree (5)	N/A
0	0	3	15	28	0

(total number of responses: 46)

#### 4. Advisory Services.

The technical advice EEPSEA provides researchers on their projects is:

##### **a) constructive**

strongly disagree (1)	2	3	4	Strongly agree (5)	N/A
0	0	3	11	26	4

(total number of responses: 44)

##### **b) prompt**

strongly disagree (1)	2	3	4	Strongly agree (5)	N/A
0	0	5	8	25	6

(total number of responses: 44)

##### **c) shows good knowledge of the subject matter.**

strongly disagree (1)	2	3	4	Strongly agree (5)	N/A
1	0	5	10	24	4

(total number of responses: 44)

#### 5. Publications

How useful do you find the various documents produced by EEPSEA?

##### **a) Research Reports**

Not useful (1)	2	3	4	very useful (5)	N/A
0	0	10	13	22	1

(total number of responses: 46)

##### **b) Special Papers**

Not useful (1)	2	3	4	very useful (5)	N/A
0	0	5	18	22	1

(total number of responses: 46)



**c) Policy Briefs**

Not useful (1)	2	3	4	very useful (5)	N/A
0	2	4	15	22	1

(total number of responses: 44)

**d) Newsletter**

Not useful (1)	2	3	4	very useful (5)	N/A
0	2	4	14	23	2

(total number of responses: 45)

**6. Web Site****a) Have you visited the EEPSEA website?**

Yes: 32      No: 12      Total: 44.

**b) If yes, how useful do you find it?**

Not useful (1)	2	3	4	very useful (5)	N/A
0	0	3	16	13	4

(total number of responses: 36)

**c) If not useful, why not?**

(i) I have no easy access to the www:3

(ii) I did not know EEPSEA had a website:2

(iii) Other: 1

(total number of responses: 6)

**7. Administrative aspects****a) How promptly was correspondence answered?**

Not at all (1)	2	3	4	Extremely good (5)	N/A
0	0	0	2	44	0

(total number of responses: 46)

**b) How promptly were contracts and project payments received?**

Not at all (1)	2	3	4	Extremely good (5)	N/A
0	0	2	8	29	5

(total number of responses: 44)

**c) How promptly were problems related to contracts and payments resolved?**

Not at all (1)	2	3	4	Extremely good (5)	N/A
0	0	2	8	26	7

(total number of responses: 43)

**d) How adequate were travel arrangements?**

Not at all (1)	2	3	4	Extremely good (5)	N/A
0	0	0	10	35	0

(total number of responses: 45)

**e) How adequate were hotel accommodations in Singapore?**

Not at all (1)	2	3	4	Extremely good (5)	N/A
0	0	1	11	34	0

(total number of responses: 46)

**f) How adequate were the meeting facilities?**

Not at all (1)	2	3	4	Extremely good (5)	N/A
0	0	1	17	27	0

(total number of responses: 45)

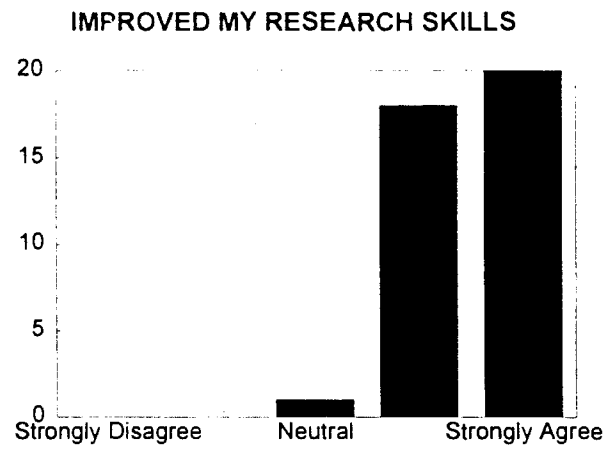
**g) How adequate was administrative support during the meeting?**

Not at all (1)	2	3	4	Extremely good (5)	N/A
0	0	0	7	38	0

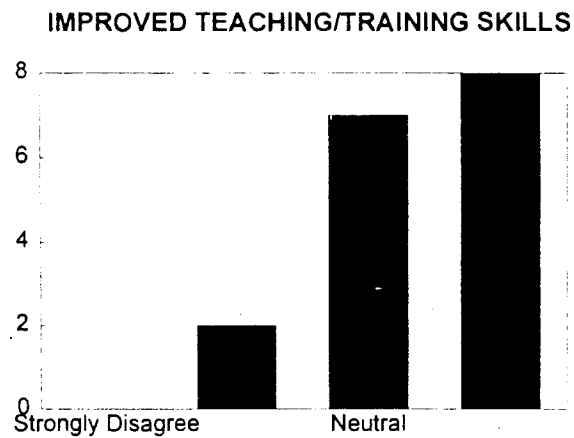
(total number of responses: 45)

## ASSESSMENT SURVEY

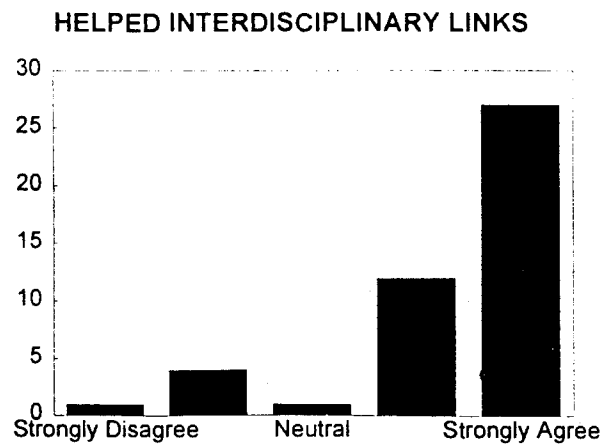
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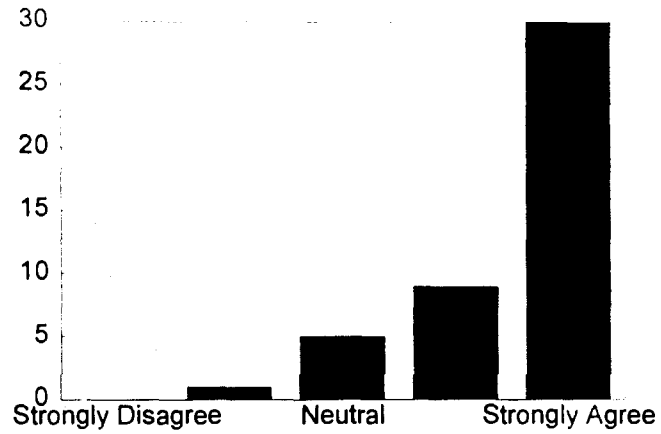


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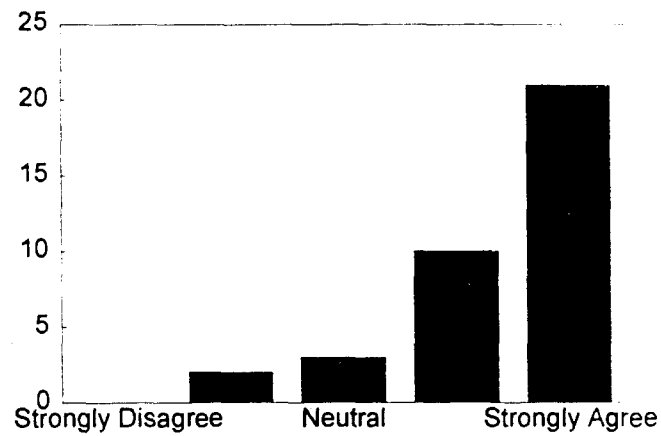
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#### EXPOSURE TO INTERNATIONAL EXPERTS



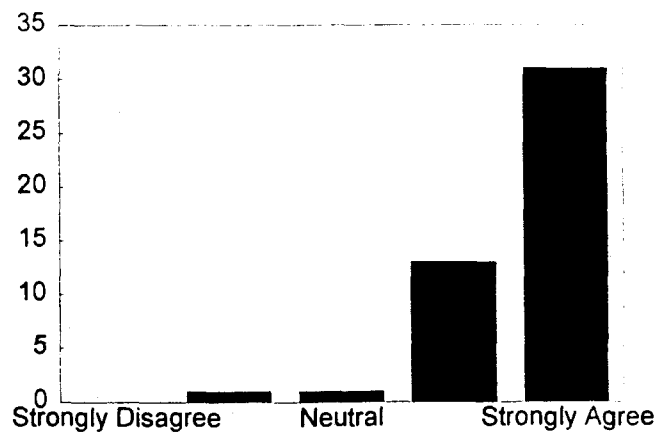
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#### DISSEMINATE RESULTS ABROAD



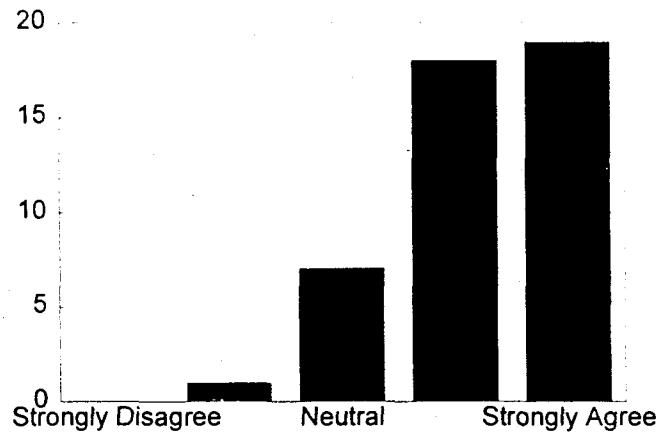
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#### WORKSHOPS USEFUL



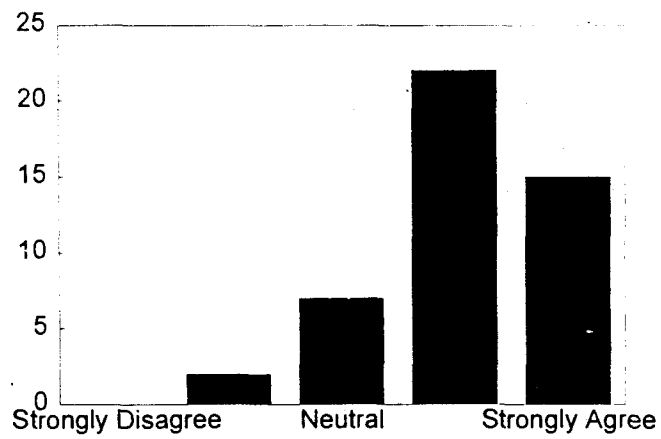
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### RIGHT ISSUES IN PLENARY WORKSHOPS



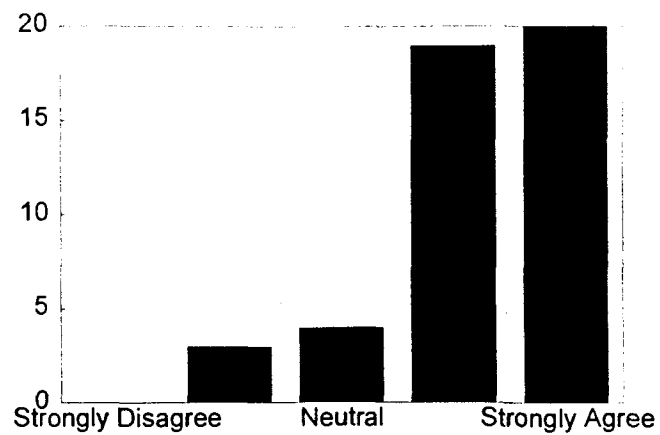
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### MICRO-MACRO BALANCE IN WORKSHOPS

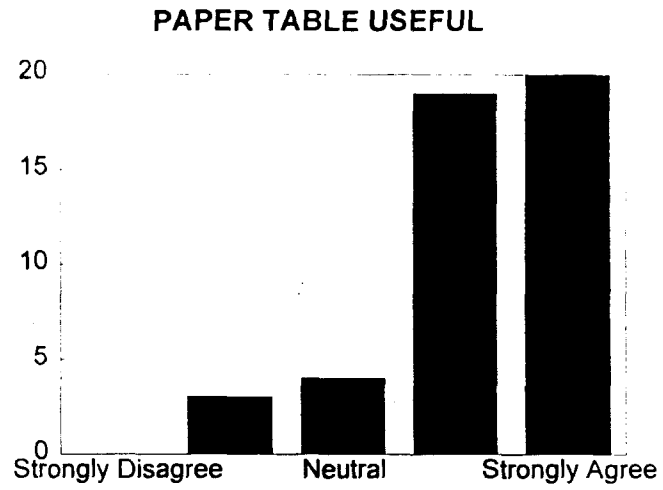


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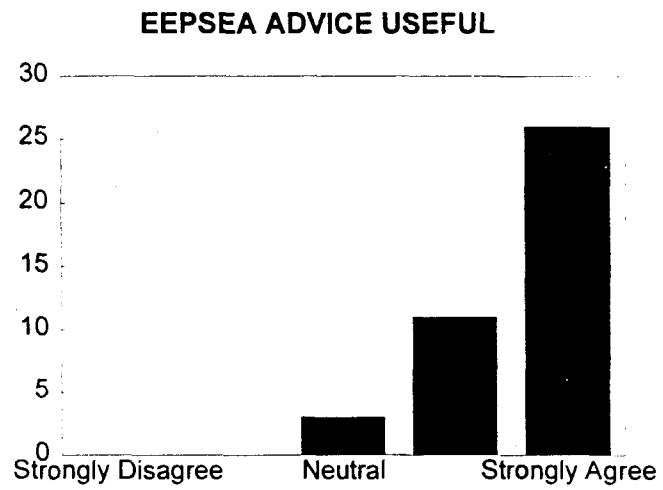
### THEORY-PRACTICE BALANCE IN WORKSHOPS



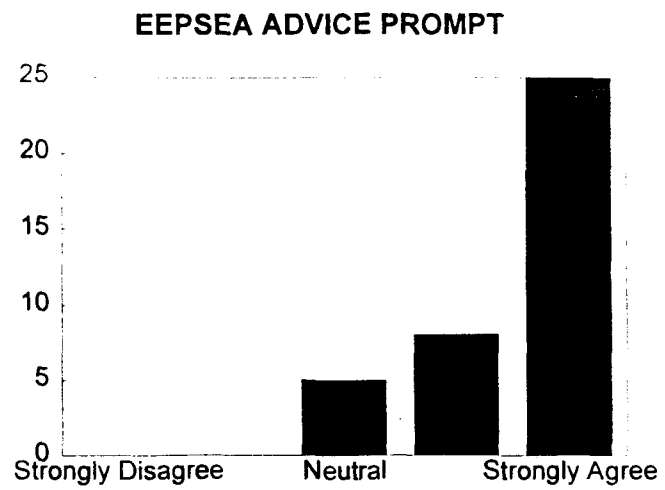
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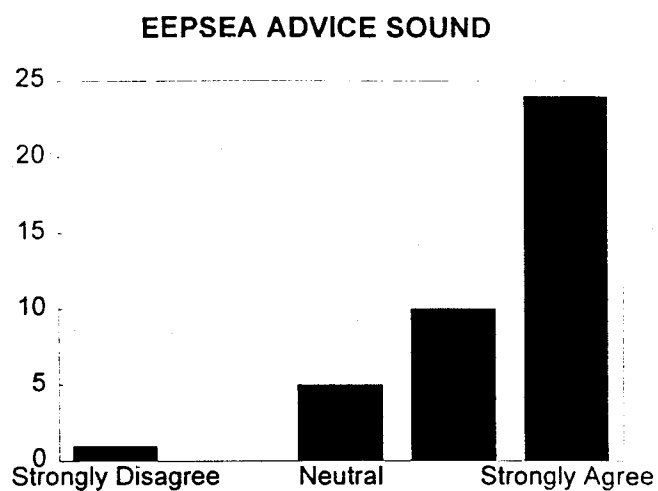
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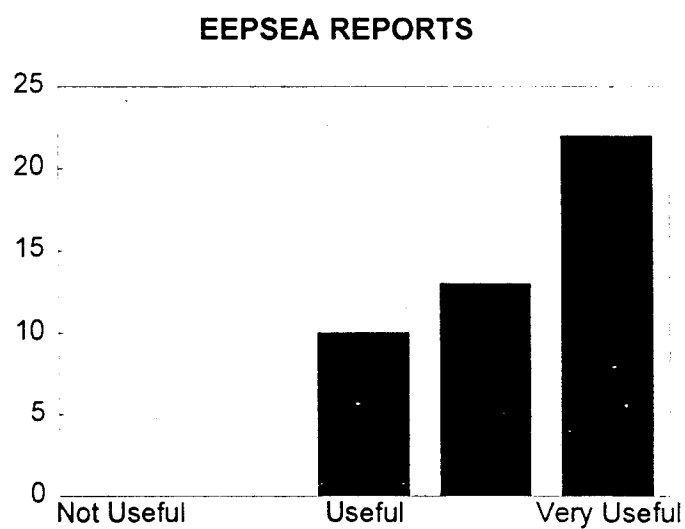
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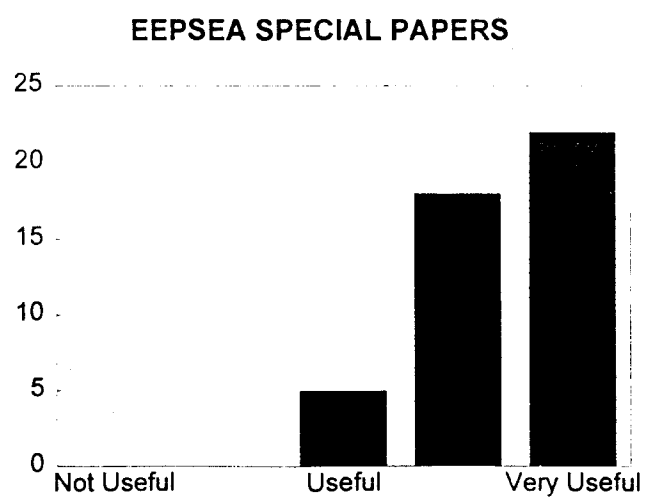
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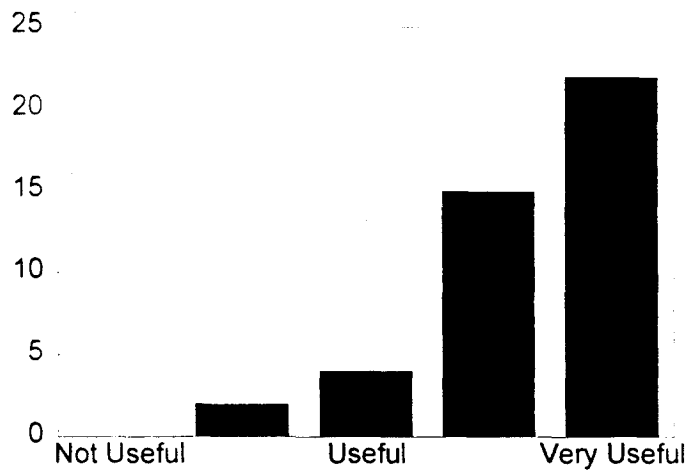


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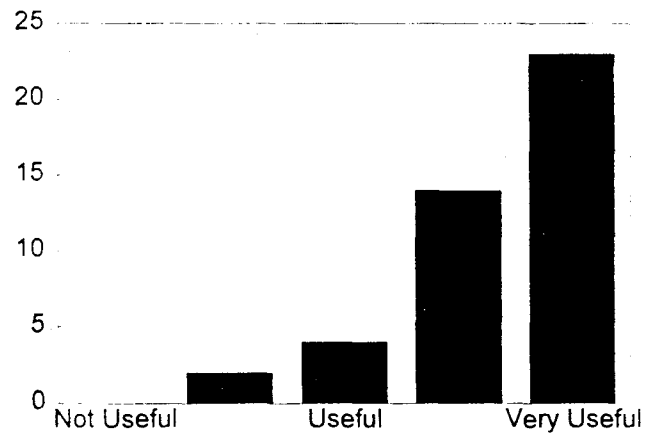
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### EEPSEA POLICY BRIEFS



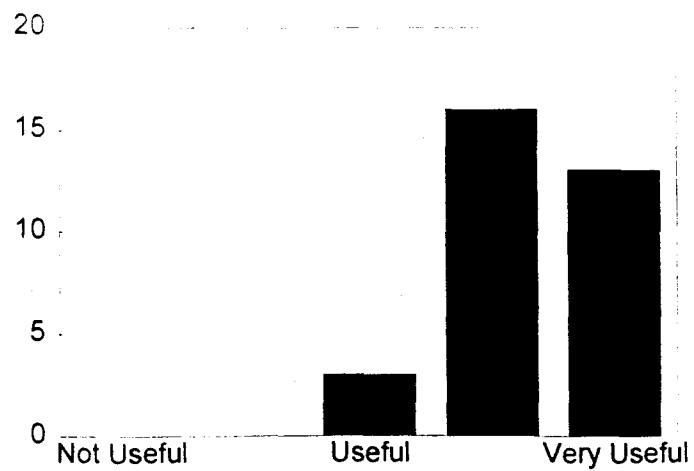
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### EEPSEA NEWSLETTER



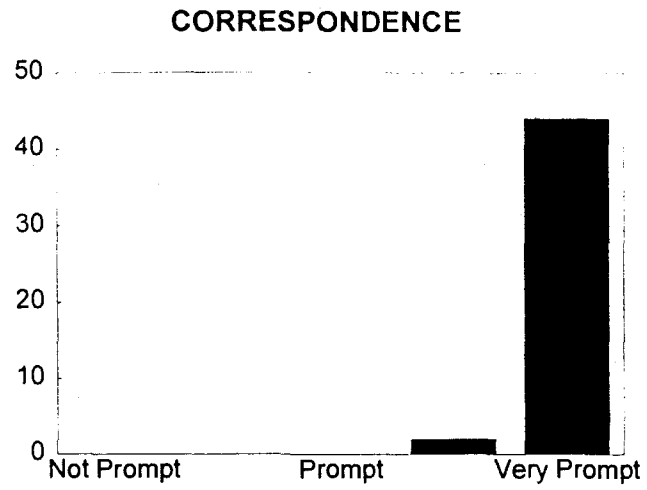
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### EEPSEA WEBSITE

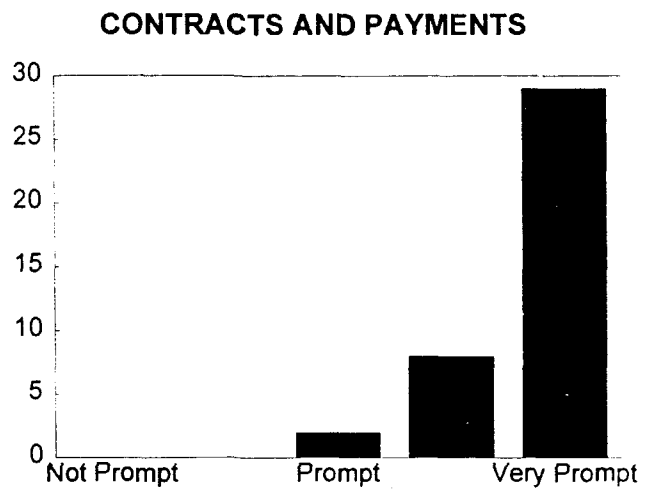




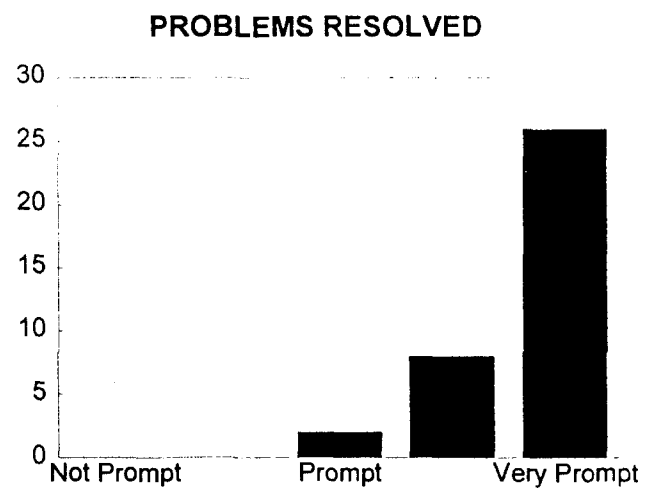
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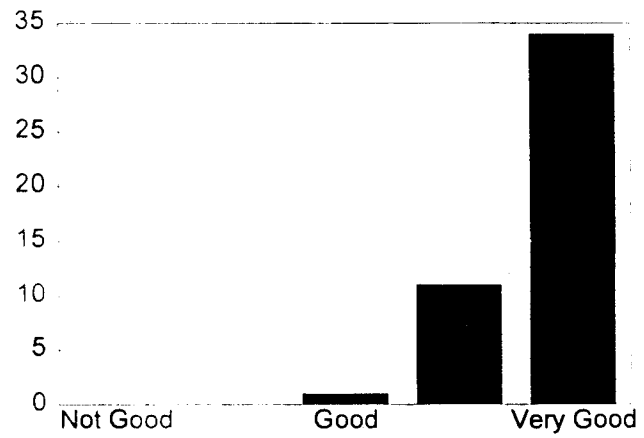
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### TRAVEL ARRANGEMENTS



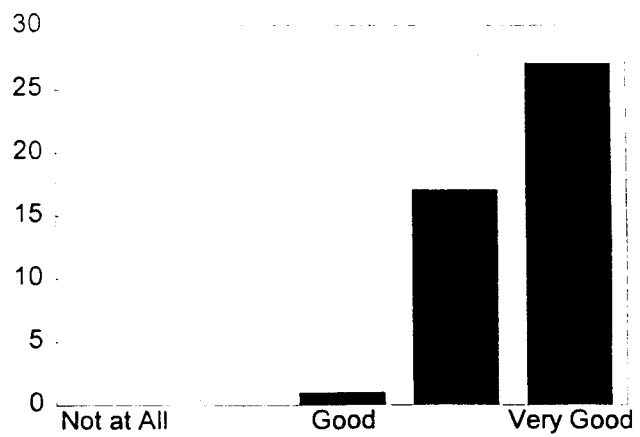
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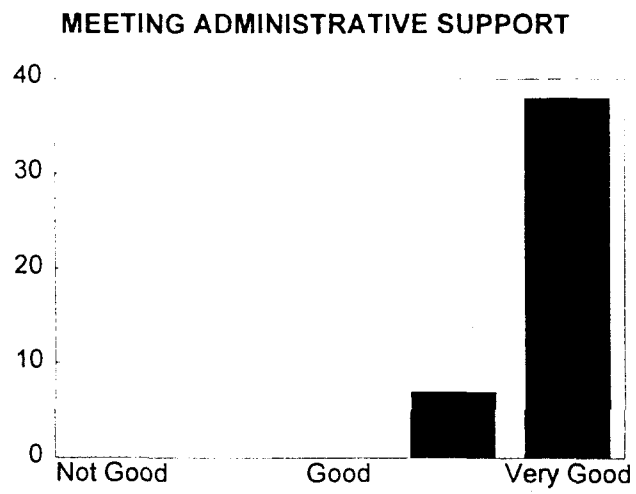
### SINGAPORE HOTEL



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### MEETING FACILITIES





ANNUAL REGIONAL COURSE  
LOS BANOS, 1997-99  
PARTICIPANTS' ASSESSMENT

Statement	Score: Average over 3 years
• The whole course has taught me many things which I expect to be able to apply in my job back home.	4.62
• The whole training environment was very suitable for learning	4.56
• The composition of the participants was very suitable for learning.	4.52
• The objectives of the course were very clearly stated.	4.71
• The objectives of the course were fully achieved.	4.57
• The requirement which was to prepare report was very useful.	4.58
• The amount of non-lecture sessions was exactly right.	4.04
• The duration of the course was exactly right.	4.1
• The workload throughout the course was just right.	3.85
• The course is worth recommending to my colleagues.	4.92
• The staff were very approachable/ready to assist.	4.95
AVERAGE	4.49

**Pollution Control Course: December 1999**  
**Participants' Assessment Questionnaire**

Q1: The objectives of the course were clearly stated.

Strongly disagree (1)	2	3	4	Strongly agree (5)	N/A
0	0	0	6	16	0

Q2: The objectives of the course were fully achieved..

Strongly disagree (1)	2	3	4	Strongly agree (5)	N/A
0	0	1	12	9	0

Q3: The case study was very useful.

Strongly disagree (1)	2	3	4	Strongly agree (5)	N/A
0	0	0	7	15	0

Q4: The discussion sessions on pollution problems were very useful.

Strongly disagree (1)	2	3	4	Strongly agree (5)	N/A
0	0	2	5	15	0

Q5: The duration of the course was exactly right..

Strongly disagree (1)	2	3	4	Strongly agree (5)	N/A
0	0	2	4	16	0

Q6: The workload throughout the course was just right.

Strongly disagree (1)	2	3	4	Strongly agree (5)	N/A
0	0	2	3	16	1

Q7: The course is worth recommending to my colleagues..

Strongly disagree (1)	2	3	4	Strongly agree (5)	N/A
0	0	0	1	21	0

Q8: My expectation about the course was fully met..

Strongly disagree (1)	2	3	4	Strongly agree (5)	N/A
0	0	2	7	13	0

Q9: The Admin. staff were very approachable/ready to assist.

Strongly disagree (1)	2	3	4	Strongly agree (5)	N/A
0	0	0	0	22	0