

DRAFT REPORT

**Review of the Environmental Economics Programme and
Environment for Development Initiative at the
Environmental Economics Unit, Göteborg University**

Devpro AB

Solna, 6 December 2009

Tom Alberts

Agnes Mwaiselage

EXECUTIVE SUMMARY

This is an evaluation of the Sida support to the Environmental Economics Programme and Environment for Development Initiative at the Environmental Economics Unit (EEU) at Göteborg's University in Sweden. The objective is stated in the Terms-of-Reference." *The review is primarily intended to assess experiences and results during 2006 up to today.*"

This Summary will highlight our main findings, the conclusions, lessons learned and recommendations. It will be non-technical and will be written for a reader who is not familiar with the Environment Economics Programme – (EEP) as such.

The evaluation Team is composed by Dr. Tom Alberts (development/environmental economist) and Dr. Agnes Mwaiselage (human settlements development/urban environment).

The Development of Environmental Economics Programme – EEP and Sida Support

To understand the development of the EEP a review of the development of Economics in Sweden is necessary. Four decades ago development economics did not exist as a separate discipline. With the rapid growth of Swedish development assistance, there was a growing need for development economists.

Sida decided in 1987 to support development economics at three Swedish universities, namely Lund, Stockholm and Göteborg's University.¹ The support was largely successful. In addition, Lund was engaged in long term capacity building in economics at the University of Dar es Salaam. SIDA², and as of 1995 Sida, has supported research and has earmarked 10% of its budget for research applications from Swedish scholar, primarily to support PhD training.

One of the first to graduate in environmental economics in Sweden was Thomas Sterner. Thomas Sterner became the first professor in environmental economics at Göteborg's University marking the beginning of a remarkable growth in Capacity building in Environmental Economics in Sweden. Since the Programme's inception, there has been a total of 39 PhD degrees awarded.³

It is important to recognize the significant Capacity building of the Environmental Economics Unit – EEU - at Göteborg's University. The EEU has evolved over several decades and there are now four full professors in environmental economics. About one third of the staff at the

¹ For more information please consult: SIPU International, the Swedish Institute for Public administration."Sida's Co-operation with Swedish Universities for Economic Monitoring and Building Swedish Capacity in Development Economics", Jerker Söderlund et.al., March 2002. The programme had two major objectives: To provide Sida with a basis for decision – making and planning through economic monitoring; and to build Swedish capacity in development economics. (p. ii)

² As of mid 1995 a profound reorganisation of Swedish aid was undertaken and most public aid institutions were merged into the new Sida.

³ **Previous Theses in environmental economics:** Sida supported 18; SAREC bilateral 1; Other with Sida/SAREC support 19; and Environmental economics 11. Source: Annex 4.

Department of economics is environmental economists. In this time period, more than 20 years, Sweden has made an enormous investment. Göteborg's University has become a world-wide recognized Centre of Excellence as is witnessed by the close cooperation with the Resources for Future, one of the most important think tanks in the USA. Senior World Bank and UNDP officials also maintain regular contact with the EEU.

Apart from Sida's support, the EEU is also financed by Göteborg's University. During the period 2000-2008 Sida, including SAREC, has invested about SEK 145 million in the Environment

Economics Programme - EEP. During the period under review, 2006-2009, there has been a rapid growth in Sida's support to EEP, rising from less than SEK 15 million in 2006 to more than SEK 30 million in 2008. There are three major components in the EEP.

Capacity Building

One of the more important components in the EEP has been **Capacity building**. A major component has been PhD training. Since 1986 a total of 21 PhDs have graduated of which 9 in 2006-2008. The cost is about SEK 1.6 million⁴ for a PhD degree. As comparison the Secretariat for Research Cooperation (FORSKSEK – former SAREC) estimates their costs to be SEK 2 million to train a PhD in a bi-lateral sandwich programme. The African Economic Research Consortium – AERC developed a MA programme in economics involving 20 universities in Sub Saharan Africa. The PhD programme started in 2002 and the costs are estimated at SEK 640 thousand for a PhD degree. While AERC's Master's programme has been an African success story, the PhD programme is not yet up to international standards. Environmental economists trained at UoG regularly teach on both of these programmes. At first sight, the PhD programme may not be cost-effective (efficient) but an economic analysis is needed taking into account costs and benefits, involving synergy effects (externalities).

The research is of high quality at EEU and in a national context the EFD centres are also providing high quality research. More on research is in the next section. The students we met all regarded the PhD programme as very good – and as one said “we are like family”. There is still a **gender imbalance**, but the EEU is aware of this fact⁵. In 2008, only 1 out of 5 students was a woman and the same results in 2006.

Helpdesk – Expert Function - University Extension

⁴ These cost estimates do not reflect the true costs and benefits to society. Some comments from the EEU can be found in Appendix.

⁵ In a recent report by UNDP “*Resource Guide on Gender and Climate Change*” it is stated that “*Poor women's limited access to resources, restricted rights, limited mobility and muted voice in shaping decisions make them highly vulnerable to climate change.*”

During the last years, climate change has become a worldwide problem. And there are of course other environmental issues to be dealt with. In this context the Sida Helpdesk has provided courses and produced many different studies, not least in preparing Country Policy Briefs on environmental issues. This support function is highly appreciated by Sida Staff members who are related to environmental issues. The demand, on the Helpdesk in terms of man hours, is greater than their available capacity.

On the basis of information provided by the Helpdesk the average hourly cost is less than SEK 400, while a Consultant would charge more than SEK 800. The hourly cost of a Sida employee is in the order of SEK 500. On all accounts, the Help desk is very cost effective (efficient).

However, it is subsidized by Göteborg's University so the economic costs would be higher. Another way of looking at the problem would be to ask: Can the same resources produce more benefits. The Consultant believes that this is the case. At this stage the Team would recommend a special study on the functions of the Helpdesk. It should also be noted, that while the EEU has increasingly recognized the role of the Private Sector, this is not yet reflected at the EEU.

Environment for Development Programme (EfD) 2006-2009

During the period six Environment for Development Centres were created, namely, in China, Ethiopia, Kenya, Tanzania, South Africa, and Costa Rica covering primarily Central America and to some extent also Latin America. All of the Centres have former graduates from UoG and they share a Web Site as of February 2008. This enables them to continue to do high quality research while at the same time net working with each other. A Follow-Up study was made on Sida supported Environmental Economics Capacity Building Program-2006 (Appendix ??).⁶ The conclusions were very positive regarding capacity building at the Centres, not least in providing an enabling environment for Capacity Building.

All of the Centres have several on-going research programmes. The Web Site was opened in February 2008. In a time span of 18 months the number of downloads had risen to more than 7 000, suggesting there is a dynamic research environment. The quality of research can be measured by the number of peer reviewed books, articles and other publications. The EEU as a whole has an impressive publication record while the EfD Centres are still relatively weak but their capacity is growing rapidly. Many environmental economists trained at UoG, but living in countries where there are no such EfD Centres also interact within this growing network.

We had various meetings with mainly Government institutions in the countries visited. Some NGOs were also visited. The Centres play a role in policy making in various ways – participating

⁶ Unfortunately a questionnaire was sent out and about 50% answered. It is to be expected that those who answered were more positive because of the contacts among the environmental economists.

on committees, preparing basic documentation and analyses for decision makers. There is growing awareness of the need and also the difficulties to reach policymakers.

The EfD programme formally started in 2006, based on previous work. This explains the rapid growth in the activities of the various EfD centres. The EEP has struck a reasonable balance; on the one hand give priority to Sida priority countries (Ethiopia, Tanzania and Kenya) and on the other hand be global in its development (China, South Africa and Costa Rica).

Impact

It is clear that the support Sida is providing has had a strong positive impact. One of the most important aspects is that as environmental issues are becoming increasingly important, the EEU is training young economists from various countries in environmental economics. Most of them have returned to their home countries and many, if not most of them are engaged in teaching, research and policy outreach. Even if Sida would close down the support to the EEU the benefits will be reaped for many decades.

The Helpdesk has performed a very important function in translating research into useful knowledge, primarily to, but not confined only to Sida.

Relevance

Environmental issues, including the use of renewable and non-renewable natural resources, have become very important on a global scale. In any society resources are scarce and for this reason environmental economics can provide important tools to deal with such issues.

In summary, the support to Environmental Economics Unit - EEU - is highly relevant.

Sustainability

The EEU is part of Göteborg's University and will most likely continue to exist without Sida funding. All Centres form part of institutions with often a long track record. At this stage, the EfD centres are not financially sustainable. But the knowledge acquired would continue to be used. The fact that the EfD Centres form part of sustainable institutions will ensure the long term viability of environmental economics in these countries.

EEU and the EfD centres for instance have not yet looked for other sources of funding such as from the various research programmes supported by the EU Commission and various foundations. With the high capacity of EEU and EfD staff and the highly relevant subject at hand, they can easily attract funding from many other research programmes.

With the economic and financial crises, there is a danger that strategic activities for a long term impact will suffer because of the need to cut back on budgets. While in the long run all costs

are variable in a shorter term perspective there are fixed costs and variable costs. Key and strategic activities such as supporting research at the EfD Centres might not get sufficiently funded.

The EfD Programme should be able to attract donor funding in a medium term perspective (5-10 years). This is also in line with the Paris declaration:

“Strengthen capacity by co-ordinated support – Percent of donor capacity-development support provided through co-ordinated programmes consistent with partners’ national development strategies.”

For several years to come, the Helpdesk will depend upon Sida funding. In the short run, the next 5 years, the EEU will mainly depend on funding from Sida and from Göteborg’s University.

Sweden has made an enormous investment in environmental economics and such an investment can quickly be destroyed. The marginal cost to Sweden, and not least to Sida, is probably significantly lower than the marginal benefits.

Recommendations

The Consultant has provided 10 general recommendations and 3 more specific ones. The major recommendation is that Sida should continue to fund the EEP at EEU of Göteborg’s Universitet during the period 2011-2015. During this period major focus should be on consolidation. There is the possibility to expand the scope of the EEP, particularly with respect of increasing the number of Environment for Development Centres.

Lesson Learnt

Capacity building requires a long-term perspective. To ensure that this investment in capacity building is maintained and further developed a long-term perspective is absolutely necessary. As Prof. Sterner said: “It takes 20 years to train a professor.”

Costs and benefits to society at large often are significantly different from financial costs and benefits. Though it has not been possible to adequately deal with these issues, the Consultant found it very useful to discuss costs and benefits since the conclusions often hinge on such an analysis.

LIST OF ACCRONYMS

(to be further developed and organised)

UDSM	University of Dar es Salaam
Sida	Swedish International Development Agency
FORSKSEK	The Secretariat for Research Cooperation
AERC	The African Economic Research Consortium
MA	Master of Arts
SSA	Sub Saharan Africa
SEK	Swedish Kronor
USA.	United States of America
CA	Central America
EU	European Union
Vattenfal,	
SKF??	
Devpro AB	
TOR	
CEEPA,	
LACEEP,	
SANDEE,	
EPSEE	
SMART -	Specific, Measurable, Actionable, Relevant and Timely
OECD/DAC	
USD	
LDC	Less Developed Countries
PRSPs	Poverty Reduction Strategy Papers
PDG	Policy for Global Development
WoS	Web of Science
PoP	Publish or Perish
SINAC	National System of Conservation Areas
CC	Climate Change
LAC	Latin American Countries
EC/EU,	
NCEA,	Netherlands Commission for Environmental Assessment
PEP	Poverty-Environment Partnership
DfiD,	
Danida,	
GTZ,	
UNDP a	
UNEP;	
WRI	World Resources Institute

ACTS	African Centre for Technology Studies
-EEPFE, DoE-AAU)	Environmental Economics Policy Forum for Ethiopia Department of Economics, Addis Ababa University
EDRI)	Ethiopian Development Research Institute
SLMP	Sustainable Land Management Programme
EfD-K	Environment for Development Kenya
.KIPPRA	
EfD -T	Environment for Development Tanzania
IRA	Institute of Resource Assessment
SEI-TZ	The Stockholm Environment Institute - Tanzania Centre
NEMC	National Environmental Management Council
SEBSA,	Socioeconomics of Environmental Goods and Services
EfD – CA	Environment for Development Centre in Central America
LACEEP	Latin American and Caribbean Environmental Economics Program
CATIE	Tropical Agricultural Research and Higher Education Center
EEPC	Environmental Economics Program for China
PKU	Peking University
EfD – C	
SFA,	
NGOs.	
EPRU	Environmental Policy Research Unit
EfD - SA	Environment for Development Centre in South Africa
SALDRU	Southern Africa Labour & Development Research Unit,
UCT	University of Cape Town
CapFish	????a scientific monitoring group
CV	
RFF	
BRAC Bangladesh University`?	
CEMARE	Center of Economic Management of Aquatic Resources

Table of Contents

EXECUTIVE SUMMARY	2
LIST OF ACCRONYMS.....	7
INTRODUCTION	11
Purpose	11
Specific Objectives.....	11
Evaluation Questions	11
Evaluation Criteria.....	13
Methodology	13
Participatory Approach	14
THE EVALUATED INTERVENTION.....	18
History.....	19
The intervention.....	20
FINDINGS.....	21
THE ENVIRONMENTAL ECONOMICS PROGRAMME	21
ACADEMIC CAPACITY BUILDING	22
RESEARCH	29
Collaborative Research – Poverty eradication and research on environmental economics.....	30
SIDA’s HELPDESK – EXTERNAL EXPERT	32
Key reports produced	35
Policy Briefs.....	37
ENVIRONMENT FOR DEVELOPMENT (EFD) INITIATIVE CENTERS.....	39
The Efd Centres	41
Ethiopia: EEPFE, (Environmental Economics Policy Forum for Ethiopia)	41
Kenya: Environment for Development Kenya.....	42
Tanzania: Environment for Development Tanzania.....	42
Central America: SEBSA, (Socioeconomics of Environmental Goods and Services)	43
China: EEPC, (Environmental Economics Program for China).....	44
Performance Assessment of Efd Center Activities	45
Administration.....	45
Academic Training.....	46
Policy Outreach	46

Research	47
Dissemination	49
Networks Partners and Collaborations with EfD	52
Conclusions and Challenges of EfD Centres	52
Main Findings of the Programme	53
EVALUATIVE CONCLUSIONS.....	54
RECOMMENDATIONS AND LESSONS LEARNT	56
GENERAL RECOMMENDATIOIS	56
SPECIFIC RECOMMENDATION AND QUESTION MARK	57
LESSONS LEARNED	58
APPENDIX.....	58
Appendix I Terms of Reference	58
Appendix II EfD Ethiopia.....	58
Appendix III EfD Tanzania.....	58
Appendix IV EfD Kenya	58
Appendix V EfD Central America	58
Appendix VI EfD South Africa	58
Appendix VII EfD China.....	58
Appendix VIII EfD in Numbers	59
Appendix IX List of PhD Graduates from Göteborg.....	59
Appendix X Some specific information on PhD Graduates	59
Appendix XI Persons contacted/met.....	59
Appendix XII References.....	59
Appendix XIII EEU's Suggestions on the Use of Citation Indices.....	59
Appendix XIV EEU's Responses on Cost-Effectiveness.....	59

INTRODUCTION

This report is an evaluation of the SIDA funded programme at the University of Gothenburg in Environmental Economics.

The Consultants have strictly followed Sida evaluation manual, Second Revision from 2007, **“Looking Back, Moving Forward – Sida Evaluation Manual”**.⁷

The assignment was awarded to Devpro AB of Sweden. The team was composed of Tom Alberts and Agnes Mwaiselage.⁸

Purpose

The review is primarily intended to assess experiences and results during 2006 up to today from the Sida supported programmes implemented by the Environmental Economics Unit (EEU) at Göteborg University: “Environment for Development” (EfD) and “Environmental Economics Capacity Building Programme”. The results of this evaluation will guide Sida’s future support to the programme.

Specific Objectives

According to the TOR the two programmes “Environment for Development” and “Environmental Economics Capacity Building Programme” should;

1. Review the relevance as well as quantitative and qualitative achievements, impacts and cost-effectiveness;
2. Provide brief recommendations with regard to future development of the programmes; and
3. Be of use to both Sida and to the EEU in developing the Plan for the 2011-2014 period.

Evaluation Questions

The Consultant translated the general evaluation questions as stated by Sida’s eleventh version of the TOR into a semi-structured questionnaire which was used as guiding questions during the field visits and various interviews which were conducted. The questions proposed in the TOR for the three project components are listed below;

⁷ Referred to as the Sida Manual.

⁸ Tom Alberts has a PhD in Economics including Environmental Economics with extensive experience in International Cooperation. Agnes Mwaiselage has a PhD in Architecture and Development and long term teaching and consultancy in Human Settlements and Urban Environment. Both are members of TUPO (www.tupo.se), a consortium of consultants with experience in developing countries.

General

- To what extent are the components of the programmes mutually supportive, what are the synergies (including how EfD centres link local knowledge to the EEU and embassies)?
- To what extent do the programmes complement and/or duplicate other support through Swedish development cooperation?
- What has worked well and what can be improved in using EEU as an efficient resource for Sida?
- What are the opportunities for long-term sustainability of the EfD centres (both in terms of financial sustainability and role as regional centres) and the other EEU programmes? How is the issue of sustainability dealt with?
- What are the key challenges and opportunities for the coming years?

Environment for Development (EfD):

- What is the relevance of EfD thematic priorities in relation to the countries' priorities, strategies and needs, as well as Swedish development cooperation priorities? Are the research topics relevant in the context of the respective countries and in a regional and international perspective?
- How does EfD relate to policy makers in recipient countries, and their priorities? And to what extent has EfD contributed to relevant international, regional and national policy and decision-making in the selected countries/regions?
- To what extent are the EfD centres at the "fore-front" and contributing to raising environmental economics issues in partner countries?
- How does EfD contribute to capacity building and institutional development for research and research management in Environmental Economics in the recipient countries?
- How are the EfD Centres connected to other stakeholders in the respective partner countries, including existing academic structures and how do different stakeholders (including centres) perceive the programme and its performance?
- Are the six chosen EfD centres located at relevant and strategic places, considering capacity building and institutional development in favour of Environmental Economics research, and long-term sustainability?
- To what extent is the initiative cost efficient?
- Who has ownership and how is local ownership promoted?
- Concerning the research process: How are research projects chosen and to what extent is the process transparent? Who sets the priorities for research programmes? How are effectivity, a transparent system, and good scientific quality secured? How does EfD promote the development of processes for research agenda setting and peer review within Environmental Economics in the recipient countries?
- How does EfD promote synergies bilaterally and regionally, and in relation to other Sida contributions, including bilateral university support and support for the regional Environmental Economics Networks (CEEPA, LACEEP, SANDEE, EPSEE)?

Helpdesk

- What outputs and impact has the helpdesk had regarding the integration of environment and climate in Sida's work? What have been primary outputs (eg documented in strategies, follow-up of PBAs and projects)?
- What is the cost efficiency of the helpdesk support?
- What is the effectiveness of the helpdesk support (i.e. does the helpdesk deliver what is expected)?
- What parts of the helpdesk support is considered to be most valuable?
- How can the support be improved (could relate to both quality and working methods)?
- Does EEU provide a unique resource or could the helpdesk services be procured elsewhere?

Graduate programme

- How does the PhD program function? Who are chosen, how are resources spent and what is the scientific quality of the programme?
- What are the results in recipient countries?
- Is the programme linked to other academic institutions, research initiatives and regional networks?
- Is the programme cost efficient?

Evaluation Criteria

The evaluation has adhered to accepted yardsticks for evaluation. Therefore, the criteria of relevance, effectiveness, impact, sustainability and efficiency have been used. The EEP/EfD is a complex intervention as defined by Sida Evaluation Manual⁹ and poses special problems. In addition the Consultant in this report has answered most, if not all the questions. Because of that the consultants main issue has been to attempt to distinguish between the financial and cost and benefit and economic benefits to society at large.

The methodology employed to answer the key questions are summarized below.

Methodology

Several of the methodological issues were identified in the revised Inception Report (23 October 2009). As mentioned in the Report there are several questions to be addressed.

There are many types of evaluations and this would belong to the category of learning from the past to improve the future. The evaluators used the following methods;

⁹ Sida Evaluation Manual, 2007, page 69. The consultant has attempted to reach a pragmatic solution in dealing with the various details of the programmes and an overall assessment of the Programmes.

Literature Review

Project information was made available electronically and in hard copies to the Review Team from SIDA EEU Gothenburg and the EfD centres. Documents and references used in this evaluation are in Appendix..... The team was overwhelmed by the volume of reports and information about the project. While a lot of the information is useful to EEP a lot of it is in a form that is not useful for monitoring the Programme at the Sida level and for the Evaluation Team.

Interviews

The research questions in the TOR were used to design a set of guiding questions which were to interview the programme staff, partners and stakeholders. The consultants raised additional questions over and above what was in the TOR and as a method of understanding issues and getting information from those were involved in the project.

The team consulted and interviewed:

1. **Sida desk officers and Sida Help Desk.** Questions and issues for discussion are as listed. However, if other issues not listed above are identified during the course of the evaluation the Team will seek to have audience with them.
2. **EEU researchers, EEU Supporting staff, EE Help Desk staff, PhD coordinator/students and other Faculty Staff** at Gothenburg on 19-20 October 2009.
3. **EfD Centre** staff
4. **EfD partners** and key stakeholders at national level, other staff in the universities/EfD host institutions in Sweden and abroad and EEU.

The list of people interviewed is in appendix

Field visits

The consultant visited EfD **Centers** in Ethiopia, Kenya and Tanzania between 27 October - 12 November 2009. Visits to other centres were not made but staffs from EfD centers in China, Central America, South Africa were interviewed in Naivasha, Kenya during their attendance to the EfD Annual Meeting.

Participatory Approach

Elisabeth Levin, former Head of Sida evaluations already in 1992 published an Evaluation Manual and the last edition was from 1994.¹⁰

¹⁰ **Evaluation Manual for Sida.** Published by the Evaluation Unit, Planning Secretariat, SIDA 1994.

¹¹This Sida manual from 1994 was not mandatory. It was not until 2004, almost 10 years after the merger of Swedish aid institutions in 1995 – SIDA was now called Sida - that a mandatory manual was published. A revised version was published in 2007: **Looking Back, Moving Forward, Sida Evaluation Manual, 2nd revised edition.**¹²

Regarding participation the 2007 Manual is clear:

*“As briefly discussed in Chapter 1.7, evaluations commissioned by Sida should be carried out in a spirit of partnership. Sida’s co-operation partners and other important stakeholder groups should be encouraged to actively participate in the evaluations that Sida initiates. For Sida, stakeholder participation is an end in itself as well as a means”*¹³

A participatory approach is time consuming so the Team, given the short time available, the participatory approach has been limited. The Consultant has raised the issue of cost effectiveness at an early stage. By doing so, the EEU has started to think in terms of cost effectiveness and this in turn has led to some important reflections on costs and benefits to society at large.

Indicators Analysis

The issues of inputs, outputs, cost-effectiveness¹⁴ and impact, have become increasingly important in evaluations of development projects/programmes. Not least with respect to indicators on poverty eradication.

Both the Holmberg’s evaluation and that from January 2009¹⁵ highlighted the need to develop indicators. The EEP has made some important advances in this respect. The Consultant made use of what was already available and requested additional indicators where it was possible to generate. The programme for instance provided important information about its publications

¹¹ Unfortunately, the Inception Report did not explicitly deal with the issue of a participatory approach and this has been area of divergent opinions. Already at this time a participatory approach was deemed important

*However, this does not mean that active participation from the recipient is not important, on the contrary. Such participation is necessary to give weight to the evaluation and to increase the opportunities for recipient authorities, project management and researchers to study the results and use the experiences and learning they provide. **The recipient country should participate in all stages of the evaluation process.***
(Levin 1994, p. 26)

¹² This will be referred to as Sida Manual.

¹³ Sida Manual, p. 58.

¹⁴ Or efficiency

¹⁵ Danielsson, Lei and Bluffstone, Randy. “Review of the Core Environmental Economics Program and the Environmental for Development (EfD) Initiative at the the Environmental Economics Unit (EEU).” Göteborg, January 2009. This is a study commissioned by the EEU.

(for example the number of peer reviewed publications). There is always a trade-off between referring to detailed reports and output or impact based reporting. The evaluation Team has focused on results/impact at the programme level and less on detailed issues for example from the EfD centres.

Regarding indicators on research, still there remains important work to be done to develop results based indicators. With respect to scientific research the Consultant would suggest to add a few indicators which should be included in the yearly reports to Sida. The number of peer reviewed articles is certainly an important step forward and provides important information. In the academic world it is not sufficient to publish an article or book. The question for the consultant was therefore, **to what extent is this knowledge used in the academic world?** Moreover, since the work of EEU has a strong focus on policy making this indicator was requested including information on how much this knowledge is used.

The Internet provides a range of possibilities to obtain information on the use of the knowledge. The following indicators can always be obtained such as

- How many times has the author been cited by other scholars? and
- How many times have an article been downloaded?

Activity level - impact

The consultant thought it would be useful to know how much the researchers are interacting with each other; with policy makers and how much the Programme attracts the interest in the World. The EfP¹⁶ has a websites <http://www.efdinitiative.org/centers/eeu-sweden/efd-in-sweden> . The EEU is part of the University of Gothenburg and also has a Web Site: <http://www.handels.gu.se/econ/EEU/> .

One would expect that if the Programme is relevant and produces interesting results, many people would visit the site and that publications are downloaded. Thus the number of visitors to the site was an important indicator of its success. If the EEP programme is successful one would expect that the number of visitors to increase over time.

In addition, the research results are made available on the site. In this context the number of downloads of articles, Discussion Papers was requested for this evaluation.

Cost effectiveness

¹⁶ The EEU has a Web site:

Most Sida evaluations only marginally analyze the cost-effectiveness of the Project/Programmes evaluated. This is of course a very important issue – does the support produce value for money?

Here it was important for the evaluation to make a clear distinction between financial costs and economic costs (social benefits and costs). This was also discussed in the Inception Report.

The EEP has developed over many years and is also a result of Sida support since the 80s to the department of economics at the universities of Gothenburg, Lund and Stockholm. The evaluation wanted to know if investments were justified in economic terms. But this was merely an academic question because the investment has been made and what was of interest is a marginal cost benefit analysis.

Having said this, the Team looked at the financial costs – cost effectiveness. The Consultant primarily dealt with average costs and benefits. With respect to the **Helpdesk** we analysed the cost per hour of their services and compared those with the fees charged by consultancies. In addition, on the suggestion of Sida, an attempt was made to estimate the hourly cost of a senior Sida employee through Sida Personnel Division. With respect to the Helpdesk an important question was asked, can it produce more benefits with available resources?¹⁷

With respect to the PhD **Training programme** the Team analysed the costs of high quality PhD programmes with those of Gothenburg. In other words, how much does it cost to train a PhD student? A report on a systematic tracer studies was requested. Even at the former SAREC, The Sida Secretariat for Research Cooperation tracer studies are rare! The EEP made a survey report available to us but regrettable it does not include all of the PhD students at the department.

For an economic analysis such pieces of information are essential. Sida has invested a lot of resources in training students. Several aspects should be analyzed. It is not uncommon to reward older staff members by granting a PhD scholarship. This means that when they have graduated they will produce benefits for a shorter time period vis-à-vis younger graduates. Also, students tend to spend many years to obtain their degrees. This increases the direct financial costs, but also the economic costs, for example income foregone.

With respect to the EfD centres SMART¹⁸ indicators are partially available and some were developed during the course of the evaluation.

¹⁷ The opportunity cost i.e. what would be the income in the best alternative use of these resources.

¹⁸ SMART indicators have to satisfy certain criteria:

- **Specific:** Is the indicator specific and clear? Is it concrete?

But cost-effectiveness only provides a partial view of the picture. The costs and benefits to society are even more important. In this report we will not attempt to quantify the benefits and costs. We will provide an analytical framework. We are dealing with scarce resources and **knowledge** is particularly difficult to deal with. Nevertheless, we will ask the question – given the amount of resources provided can more benefits be obtained. And a corollary, would an increase in the budget provide more benefits than allocating Sida resources to other programmes?

Gender

During the evaluation gender issues were discussed. This includes both the share of females in the various Programme activities as well as the research focus of the EEP.

Assessment

The evaluation is also guided by the OECD/DAC evaluation and assessment model. While factors of success proposed in the Review of the Core Environmental Economics Program and the Environmental for Development (EfD) Initiative at the Environmental Economics Unit (EEU) by Leif Danielsson and Randy Bluffstone in January 2009 are an additional guide to this evaluation.

Therefore the Consultants have assessed the relevancy, efficiency and effectiveness as requested in the terms of reference. The issue of cost effectiveness for instance was raised by the consultants at an early stage. By doing so, the EEU has started to think in terms of cost effectiveness and this in turn has led to some important reflections on costs and benefits to society at large.

THE EVALUATED INTERVENTION

-
- **Measurable:** Will you be able to collect the necessary information for this indicator? Is there a source for the information you need? Do you have the resources to collect the information or will it require too much time and skill to do so?
 - **Actionable:** Would you be able to take action, if necessary, in response to the information that the indicator provides? Will the indicator tell you enough to make an informed decision?
 - **Relevant:** Will the indicator give you information that is necessary for decision-making about your project/program, or will it give you information that is only “nice to know”?
 - **Timely:** Will the indicator tell you what you need to know at the right time? Are the methods used to collect data for your indicator (e.g., median family income) done frequently enough to enable you to make timely decisions?

History

Environmental degradation and widespread poverty continue to be key development challenges. Despite major international efforts and achievements, environmental and climate problems do not seem to go away in the near future. Forest-, soil-, fisheries- and water resources are being depleted in practically all developing countries; air and water pollution are widespread in the poorest communities. The World's poorest people, who make less than 1 USD per day, recently increased to 2 USD, are disproportionately affected by these problems; they are deprived of rights to these resources, and thus lack access to many essential ecosystem services on which they depend.

The increased global awareness of the climate change threat has also propelled climate and energy issues to the top of the Swedish development agenda. Environment and climate change is therefore one of the three thematic priorities for Swedish development cooperation.

Since 1990 Sida defined environmental economics as an area of strategic importance to promote sustainable development. Environmental economics focuses on understanding and maximizing human welfare given resource constraints. The application of environmental economics is therefore most relevant in the poorest countries. It uses analytical tools to support sustainable development by identifying environment-poverty traps, addressing environmental constraints, and managing natural resources. Specifically, it is a useful and cost-effective tool to (i) analyse and understand many of the driving forces behind environmental degradation and negative poverty-environment links, (ii) reveal the economic costs of this degradation, and the benefits of sound environmental management, and (iii) design efficient instruments to deal with these environmental problems.

Environmental economics offers possibilities to increase government revenues and thus contribute to poverty alleviation and promote environmental justice. An overarching objective is **Poverty Reduction**. In this context it is important to highlight some aspects.

In the past, it became increasingly recognized the Less Developed Countries (LDCs) would not be able to repay their foreign debts. The donor community agreed to cancel a significant part of the debts subject to the condition that the resources thus released would be used in poverty eradication. It was required that LDCs would have to prepare Poverty Reduction Strategy Papers (PRSPs). Thus, most LDCs have developed such papers and subsequently strategies.

The donor community also decided to use a major part of their resources through a Joint financing system, primarily Budget Support. The responsibility of monitoring the effects on poverty rests with the respective Government. In this context environmental economics has an important role to play and the Efd Centres have a challenge to "make their voices heard." In

this context, there is a gap between policy “making” and actual policies. With respect to budget support, as far as we know Sida is only providing budget support to Tanzania.

The intervention

The potential for environmental economics to support poverty alleviation and sustainable environmental management is severely constrained by four gaps: (i) the **capacity gap** – that there are too few well trained environmental economists to address all the daunting challenges; (ii) a **knowledge gap** – that there is too little analysis carried out on key poverty – environment linkages; (iii) a **communication gap** – that the existing knowledge is not well communicated to policy makers and civil servants responsible for design and implementation of policies; (iv) an **institutional gap** – that enables the existing capacity to carry out policy relevant research and communicate this to the relevant stakeholders see Figure.....

The Sida funded Environmental Economics Program (EEP) in cooperation with the Environmental Economics Unit (EEU) of the Department of Economics at Göteborg University which started in 1991/92, is designed exactly to address these gaps.

EEP formally consists of three major components:

(i) **Academic capacity building:** The objective of this component is to build capacity in developing countries to teach, to do research, and to give policy advice in environmental economics and sustainable development. A PhD program in environmental and development economics with a sequence of specialization courses and

(ii) **Expert advice to Sida:** The role of Sida’s Environmental Economics (EE) expert function is to contribute to the goals of Sweden’s Policy for Global Development (PGD) and support Sida in this effort by providing timely and relevant expertise. In this context the Helpdesk has an important role.

The above project components of the programme include a graduate programme, support to Environmental economics research, a Helpdesk service for Sida and dissemination of results at Environment and Economics Unit (EEU).

(iii) **Environment for Development Initiative (EfD)**, that consists of six environmental economics centres. The centres carry out policy relevant research on poverty and environment issues in close collaboration with ongoing policy processes and link these to their graduate programs. The activities include core support to the centres, collaborative thematic research, and support to graduate programs and special attention to stakeholder dialogue.

The **components are mutually reinforcing** and together they form a **coherent program**.

This cooperation has been covered by a succession of agreements with the two current ones covering the period 2006-2009 and with an extension until 2010. The new programme will cover the period 2011-2014.

FINDINGS

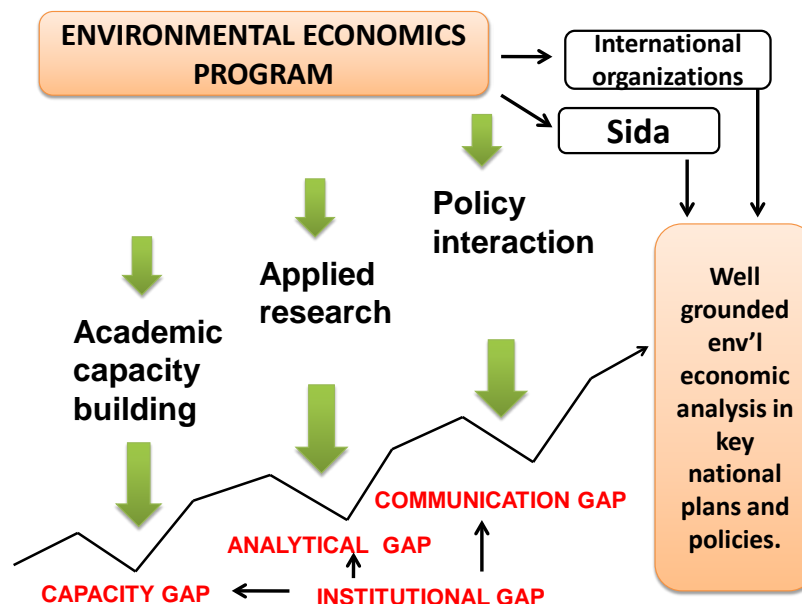
THE ENVIRONMENTAL ECONOMICS PROGRAMME

The present Environment Economics Programme (EEP) at UoG has evolved over the years and there are now four full professors in economics. About one third of the staff at the Department of Economics is environmental economists. In this time period, more than 20 years, Sweden has made an enormous investment. Göteborg's University has become a world-wide recognized Centre of Excellence as is witnessed by the close cooperation with the Resources for Future, one of the most important think tanks in the USA. Senior World Bank Officials also maintain contact with the EEU.

EEP consists of several components. As was mentioned earlier, the major components to be considered are:

1. Academic capacity building
2. Applied Research and
3. Policy Interaction

Figure 1: Components of the Environmental Economics Programme



Source: EFD, 2009

This conceptual framework is quite useful and we have in general organized the material in line with this framework.

ACADEMIC CAPACITY BUILDING

One of the more important outputs in Academic Capacity building has been the training of students in Environmental Economics. This is a truly international programme as most of the students are non-Europeans. In this section we have not only provided information on the academic capacity building, in terms of e.g. number of PhD graduates, but have also included information on the output of research activities. While the investment in PhD training has resulted in a number of outputs, there is also the question of: to what extent has this capacity been utilized and for the developed.

Environmental economics forms part of economics as whole and it is reflected that a major part of the courses are taught to all students of economics. The specialization courses start during the 2nd year. The development of the PhD Programme has been a joint venture with the Beijer Institute in Stockholm, were the well-known environmental economist Professor Karl Göran Mähler. Over time the EEU has developed its own capacity so the number of courses given by the Beijer Institute has become insignificant.

The EEU has managed to put together an impressive amount of information requested by the evaluators. Table 1 provides information on the number of PhD graduating in environmental economics at the Department of Economics at Göteborg's Universitet.

Table 1: PhD Graduates in Environmental Economics Department of Economics UoG

Year	PhD graduates		
	Sida financed	Other financing	Total
1986	0	1	1
1988	0	1	1
1989	0	1	1
1996	0	1	1
1998	0	4	4
1994 ¹⁹	1	0	1

¹⁹ There are some inconsistencies which have to be corrected. The changes will not affect the major conclusions.

1998	1	4	5
1999	1	2	3
2000	0	1	1
2001	1	4	5
2002	1	2	3
2003	3	4	7
2004	2	2	4
2005	2	4	6
2006	2	1	3
2007	4	5	9
2008	3	1	4
Total	21	38	59

The detailed figures can be found in Appendix ??.

Since 1986 until 2009 not less than 59 PhDs have graduated in Environmental economics at the EEU of the Department of Economics. In developing an institutional capacity there is a need for a critical mass of academics. During the 80s a few PhDs graduated in environmental economics. This paved the way for the rapid growth in subsequent years. This investment in the 80s made it possible for Sida to use the emerging academic capacity. This means that a major investment had already been made. Many of the students of the PhD Programme, not financed by Sida, are from LDCs. This suggests that from development perspective point of view, the Sida support has yielded benefits beyond Sida's financing.

Sida's support the PhD programme started in 1992 and the first student graduated in 1998. Thereafter there has been a substantial increase in the number of student financed by Sida. Today, there are 14 PhD students on the Programme, 5 from the 2006 batch, and 5 from the 2008 batch. They will receive their degrees over a time span of 5-7 years. The number of years to obtain their degrees seems to be on the high side, 5-7 years. Still it is not alarmingly high. Of course this means additional costs, financial cost view as well as from an economic point of view. By having intakes every two years the PhD Programme has become more cost-effective. If Sida would reduce the long term budget, here is an area where the PhD programme might consider having intakes only every 3 years. That would in practical terms have the next intake 2011 instead of 2010.

The data available suggest that the students are generally young and can then generate benefits over a longer time span vis-à-vis older PhD students. This aspect is often overlooked in research capacity building evaluations.

As far as a regional distribution Africa dominates. This should be as expected because poverty is particularly acute in many African countries.

Table 2: Number of PhD Graduates form LDCs

Continent	No. of PhDs and PhD students
Africa	21
Asia	8
Latin America	5
Total	34

About **gender** issues, the PhD programme was dominated by men for about a decade, and the first woman to obtain her PhD degree was in the year 2000. For almost a decade environmental economics was dominated by men. In later years this imbalance has been somewhat reduced.

There are strong synergetic effects between the Sida financed programme and the non Sida funded part. There are certain economics of scale, the additional cost to train a PhD student is significantly lower than the average costs, for example lecturing 5 or 15 students cost roughly the same – but supervision costs will of course. Of course increase.

The Consultant has had several discussions with the EEP regarding the **cost-effectiveness** (efficiency). The cost per PhD graduate was estimated by the EEP to be in the order of SEK 1.6 million while FORSEK estimates is in the order of SEK 2 million to train a PhD in bilateral sandwich programme. The AERC's collaborative PhD programme, involving 8 universities in SSA, the cost is about SEK 600 thousand. EEP has provided comments on the estimates and they can be found in Appendix ???. The EEU has consistently argued that there are synergy effects. While this is true, costs have to be considered. And although there is a trade-off between quality and costs, the costs must be reasonable in an international context.

As can see from Table ??? in the Appendix, several of the Sida graduates are working with the EEP. Many graduated from the Programme have become active within the EfD – EEP of the University. A significant number have also been employed by International organizations such as the World Bank and UNDP.

The Appendix ??? suggests that a majority of the graduates maintains contact with EEU. The EfDs will be treated elsewhere.

During the period 6 development centres were created, namely the China, Ethiopia, Kenya, Tanzania, South Africa, and Costa Rica covering primarily Central America and to some extent also South America and Latin America. All of the Centres have former graduates from UoG and they share a Web Site. This enables them to continue to do high quality research while at the same time net working with each other. A Follow-Up study was made on Sida supported Environmental Economics Capacity Building Program-2006 (Appendix VII).²⁰

The Study raises several important questions:

“How much of your work time significantly relates to Environmental Economics?”

Withdrawing currently enrolled students and visiting researchers, about 80 percent of EEU alumni’s are living in their indigenous countries. Results are encouraging as they suggest that the ambition to avoid brain drain effects has proved successful. Respondents are geographically divided according to below figure.

Where are you currently living?

Looking specifically at the present working situation of alumni’s, about 49 percent defined themselves as mainly occupied with *research*, 37 percent as *teachers*, while about 14 percent worked mainly with *advisory* and/or *decision making*. When asked to look back at their time at the EEU and review the impact collaboration/training has had on their future *professional careers* mean response was very positive (4.4 on a scale ranging from 1=no impact to 5=crucial impact). About the same appraisal (4.5) was obtained when respondents were asked about the usefulness of their EEU training for *later working experiences*.”

The Team met with many of the PhD students, mainly from the 2006 and 2008 batches. They were all young and seemed to be very bright students. This should come as no surprise since there are more than a hundred applicants every 2nd years. Having intakes every 2 years is an effective way to economize on scarce human resources. The students were highly motivated and seemed to looking forward to return to their home countries and to continue to work with the EEP “family”.

Thus far, focus has been on capacity building and next will follow a discussion of scientific quality. As was mentioned in the section on methodology several verifiable indicators can be used. One such indicator is the number of peer reviewed books and articles. A peer review process means that before a study is published it is sent to an anonymous evaluator(s). S/he

²⁰ Unfortunately a questionnaire was sent out and only about 50% answered. It is to be expected that those who answered were more positive because of the contacts among the environmental economists.

will then assess whether it us up to scientific standards. It is not uncommon for the author to have to rewrite a significant part of the article submitted, before it can be accepted.

While the number of peer reviewed publications is important equally, if not more important, is that scholars **read** the articles, and not least **use** the articles in research. At our request, the EEP has compiled detailed information. The detailed information can be found in Appendix. We have, however, hidden the names of the various people involved. There are several sources for information. One is the Web of Science (WoS) that counts the number of citations in academic papers, books and conference proceedings PoP). The other one, Google scholar provides statistics under the heading “Publish or Perish (PoP). PoP also includes reports and other “less academically distinguished references. As an example on the number The number Papers published the WoS records that the EEU in-house research there are 165 while the PoP indentifies 396 publications.

Additional indicators have been developed by the EEU and they can also be found in [Appendix ??](#).

Table 3: Papers Published by EEU and EEP staff and Citations

Research by	Number of papers	Number of citations
PhDs at EEU	396	4630
PhDs in the EEP	157	632
Total	553	5262

Source EEU

The Table clearly shows that the output of the people directly associated with EEP has been about 550. Of course the EEU dominates because it has a longer track record than the researchers outside the EEU. It is encouraging to note that the total number of citations is almost 5 300.

It is the intention of EEU to continue the results-monitoring of research be relying on citation indices. The EEU is presently exploring how to use various citation indices. Several concerns have been expressed regarding the use of such indices. One concern expressed is that there is a tendency for scientists to focus on theoretical work. If so, policy relevant research would not attract scholars.

Another comment made is that there are difficulties in several LDCs to have access to the Internet. In such cases a citation index would not be adequate. The Consultant still considers that the use of citation indices would be useful to assess the impact of the Programme.

While data are readily available on the publications of a specific person, it is more difficult to measure the output of the various EfD centres involved. The EEP has included statistics in its annual reports to Sida. The following table summarizes the combined output of the EfD Centres.

Table 4: Academic Output of the EfD Centres

Output	2007	2008
International Journals	11	10
Regional Journals	1	3
Domestic Journals	0	11
Discussion Papers	4	41
Book chapters	3	6

The key data for measuring academic performance of the EfD Centres are Publications in International Journals and Book Chapters. The number of Articles has remained practically constant while there has been an increase in the number of chapters. This is positive and is a reflection of the importance of EEP at Gothenburg involving researchers from the various Centres. In summary, the academic output of the EfD Centres remains weak but growing.

In Summary, during a time span of twenty years Environmental economics has become accepted as a special discipline within economics. A small committed group of people in Sweden, got their PhD degrees and set in motion a process of capacity building not only in Sweden, but also in LDCs as a way to eradicate poverty. Gothenburg has now become internationally recognized as a Centre of Excellence. In the view of the Consultant, this enormous investment should not be wasted.

A major part has come from these young professionals in investing their time and commitment in this endeavor.

Programme Budget

The Programme has grown very rapidly. During period 2000-2008, Sida and Sida/SAREC, have spent about SEK 145 million.

As can be seen there is a substantial growth every year since 2000. However in 2007 the costs almost doubled as a result of the EfD Programme becomes operational and the scope of the EEP programme becomes larger.

In the year 2000 the annual costs were SEK 7.3 million and in 2007 and 2008 the figure had risen to SEK 31.0 million.

Figure 2: EEP Costs

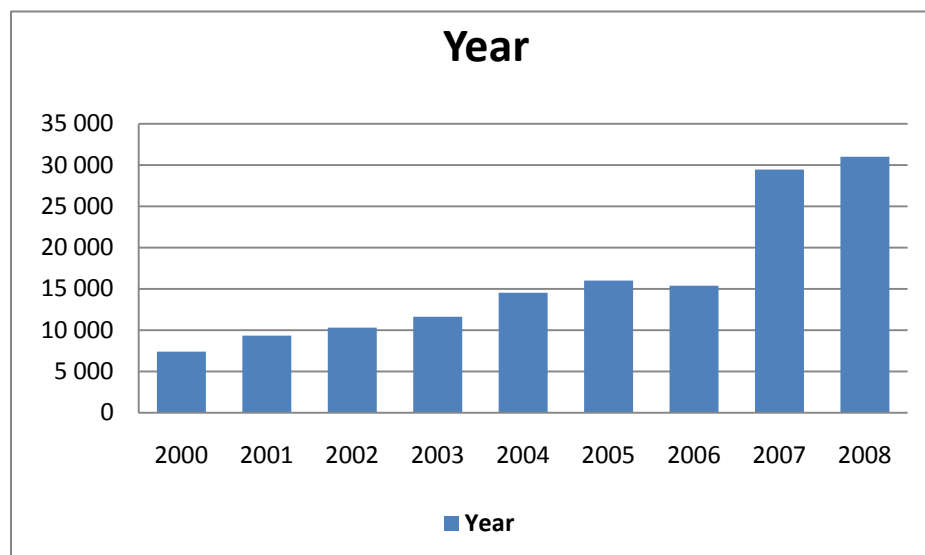


Table 5: Costs of EEP 2006-2008 (SEK thousand)

Year	Sida/SAREC	Sida	Sida Bas	Sida EfD	Total
2000	3 784	3 589			7 373
2001	5 587	3 723			9 310
2002		10 298			10 298
2003		11 620			11 620
2004		14 507			14 507
2005		15 995			15 995
2006			15 375		15 375
2007			14 522	14 934	29 456
2008			17 548	13 446	30 994
Total	9 371	59 732	47 445	28 380	144 928

Source: EEU accounts²¹

Though the EfD programme started in 2006 it was only in December that year that the money was received by the EEU. Budget details can be found the Appendix ??

The Breakdown of the budget²² for the period can be found below:

²¹ These figures agree with those of Holmberg 2006.

²² We have opted not to include 2009 since the final figures for 2009 are not yet available.

Table 6: Costs of Sida EEU cooperation

Activity	2006	2007	2008	Total	Per cent
Capacity building in EE	4 981	4 117	4 991	14 089	18,6%
Inst. development and EE appl.	5 080	3 052	4 574	12 706	16,8%
Helpdesk for Sida	1 435	1 821	2 787	6 043	8,0%
Dissemination of information	376	1 716	2 930	5 023	6,6%
Fees to Gothenburg university ²³	3 503	3 817	2 265	9 584	12,6%
EfD	0	14 934	13 446	28 380	37,4%
Total	15 375	29 456	30 994	75 825	100,0%

While the EfD programme formally started in 2006, the funds were not released until December 2006. However, there were many activities carried out in 2006 related to EfD but financed under different budget lines.

According to data available the fees paid to the University has been roughly 13%. Pressures are strong on the Universities in Sweden to cover costs. For this reason, the charges of the UoG will grow in the future, and this process has already started.

RESEARCH

In the previous section we have provided information on research as a capacity building component. Here some additional comments will be made.

The research is of high quality both at EEU and in EfD centres in six countries under the Environment Economics Programme (EEP). More on research is in the next section. The students we met all regarded the PhD programme as very good – and as one said “we are like family”. There is still a gender imbalance but the EEU is aware of this fact²⁴. In 2008, only 1 out of 5 students was a woman and the same results in 2006. This is a reflection of the imbalance that exists from countries where the students come from. Most of the people interviewed had the opinion that in the future there would be more women than men in environmental economics. This is a result of the changing gender situation in higher learning institutions in these countries and the growing interest by women to become economists.

²³ We know that the University fees have increased. But the Holmberg report estimates the University fee to be 25%. There is a need to review the statistical information.

²⁴ In a recent report by UNDP “*Resource Guide on Gender and Climate Change*” it is stated that “*Poor women’s limited access to resources, restricted rights, limited mobility and muted voice in shaping decisions make them highly vulnerable to climate change.*”

Collaborative Research – Poverty eradication and research on environmental economics

There are many areas where scientific research can provide very relevant policy recommendations. Below follows a summary of research programmes which are very relevant for many, if not most LDCs. Moreover, they show how collaborative research programmes are emerging.

Fuel prices – research initiated at EEU in Gothenburg

The rapid increase of fuel prices in 2007 caused great problems in many LDCs. Riots took place in several countries. Many governments attempted to maintain fuel prices even if it meant a direct subsidy. The tax base is generally weak so the governments' possibilities to subsidize fuel prices were limited.

At first sight it is easy to conclude that the increase of fuel prices would primarily affect the poor. However, the research on fuel prices has a fairly exact set of methods to investigate this matter. One of the first steps is to see what fraction of income or expenditures is spent on an item such as fuel and then compare the burden of raised fuel taxes between the different strata in society – often the income deciles. In very low income countries, the result is often that the poor hardly spend anything on such fuels and in fact they do not even in percent of their income spend as much as richer people.

This is somewhat counteracted by the fact that poor people spend more on public transport which of course contains some component of fuel costs. However even summing various indirect uses, the poor spend a lower proportion of their income on fuels than the rich. The opposite applies to food. This illustrates why it is better for the poor if the state raises revenue through fuel taxes than taxes on food or value added taxes. Given that the state needs some revenue (most developing countries have very weak tax bases and tax systems), it is better for the poor that fuels are taxed.

Of course, the actual policies to be implemented must take into account the socio-economic context of the country/regions. The regional context is important because if a country decides to increase the long run price of fuel it will have effects on other countries as well. In general the LDCs capacity to control border trade is limited. For this reason the price policy of one country will affect the prices of neighbouring countries.

The case of fuel prices is a research programme primarily initiated by the EEU in Gothenburg and several EfD Centres were collaborating. With respect to policy making, the area of taxing fuel prices is politically very sensitive. At this stage the Centres would probably have limited possibilities to influence policy making. It was interesting to note that one senior Government official did not understand the policy implications and believed that fuel prices should continue to be subsidized. – The communication between researchers and policy makers is not an easy task!

In a longer perspective this issue will surely become important. The research results are very interesting and will surely attract global attention and influence the debate on the environment, not least the discourse on climate change.

As a result of the interaction with EfD researchers and other environmental economists, the scientific quality has been secured. Resources for the Future (RFF) will shortly publish a book on the subject and chapter-authors include both famous US authors with articles from American Economic Review and young researchers from developing countries. Many of these are from the EfD centres but there are also other researchers, tied for instance to CEEPA or other regional or local networks. The researchers have also taken the effort to participate in public debates for instance in the “Ghana Financial Times” where there was an intensive debate about whether the government was letting the poor down when they allowed the fuel prices to rise. EfD researchers, Wisdom Akpaly, Elizabeth Robinson and Thomas Sterner wrote to say that the poor were more benefited by lower taxes on food and provision of good services like education and health than by artificially subsidised transport fuels.

The book has case studies from a diverse selection of both rich and poor economies including formerly planned economies. It shows that fuel taxation on the whole is typically progressive in very poor economies but neutral or even somewhat regressive in richer economies. Considering the urgency of taxing fuels from the viewpoint of climate change, this book fills an important gap in identifying and analysing one of the most controversial barriers to more fuel taxation.

Entrance fees to National Parks

This is a collaborative research which was initiated by an Environment for Development Centre

While the previous research programme was initiated by the EEU, there is a growing number of research programmes initiated by the Centres themselves. One interesting research is the entrance fees to National Parks in Costa Rica. While tourists are willing to pay several thousand USD dollars to come to Costa Rica and visit natural parks, the entrance fees are in the order of 9 USD. Studies show that the average willingness to pay is around 15 USD giving the opportunity to raise revenues.

The Centre EfD-Central America has been working closely with the Costa Rican National System of Conservation Areas (SINAC) in the development and in-the-field implementation of methodologies for increasing revenues from tourism. Including setting entrance fees to protected areas that balance visitation and carrying capacity, and strategies for using donations as a method to raise additional funding.

This cooperation with SINAC is a great example of policy interaction. Academia and policy makers benefit from each other and create the perfect setting for doing both scientific and policy oriented research.

But an effective collaboration with policy makers not only requires a lot of meetings and lobbying efforts, it is also necessary truthfully hear their demands and openly discuss what can be achieved. They have included policy makers from the very initial stages and build a scenario for discussion of ideas and needs. In this way some of the demands of governmental officers as well as community leaders were included in the research.

Building a good reputation and long lasting working relationship requires delivering what is promised. Solid research results and professional ethics create the perfect conditions for generating good reputation to advice policy makers and the scholarly community. Additionally, attention is requiring when presenting research results in an accessible way to a non-academic audience. All this effort to build up a reputation helps to open the doors research permits and access to important data.

National Parks play an important role in the economies of many countries in Sub Saharan Africa (SSA). The National Parks attract a great number of tourists and methodologies for setting entrance fees and other scheme to increasing revenues for nearby communities are clearly needed. The lessons learnt from the Central American experience could contribute to enrich similar processes in the region and there is a lot of interest from the Kenyan Park Authorities and of course the EfD centre in Kenya.

This research programme was initiated by the Costa Rican Centre and there have been some contacts with a researcher at the EfD Centre in Cape Town, Dr. Edwin Muchapondwa.

SIDA's HELPDESK – EXTERNAL EXPERT

The overall objective of the Environmental Economics (EE) expert function is to provide support to Sida in the integration of strategic environmental and climate change concerns in Swedish development cooperation. The work includes:

- (i) analysis of environmental and climate-change issues in Sweden’s national and regional cooperation strategies,
- (ii) supporting methodological development and providing advice to Sida,
- (iii) training and communication,
- (iv) methodological development in international processes, and (v) project management.

Integration of environment and climate change issues in development cooperation strategies is achieved through a combination of written analytical input (environmental and climate change policy briefs), tele-conferences or personal meetings and comments on draft cooperation strategies. The EE expert function is frequently asked to provide expert advice and write statements or comment on documents or to participate in methodological development (in Sweden and internationally). Increasingly the EE expert function has been asked to contribute to capacity development.

Table 7: Environment and Climate Change Policy Briefs²⁵ during the time period 2006 - 2009 (Jan -Sept)

Year	No of Env and CC Policy Briefs	Countries/regions
2006	7	Bangladesh (2), Cambodia, Guatemala, Honduras, Moldova, Uganda
2007	7	Albania, Bolivia, Kosovo, Lake Victoria*, Montenegro, Sudan, Serbia
2008	16	Albania**, Botswana, China, DR Congo, Colombia, Ethiopia, India, Indonesia, Kosovo**, Liberia, Namibia, Rwanda, Serbia**, South Africa, Timor-Leste, Ukraine
2009 (Jan-Sept)	6	Cambodia, Georgia, Macedonia, Regional Africa, Regional LAC, Turkey

* Including separate Environmental and Climate Change policy briefs for Burundi, Kenya, Tanzania, Rwanda and Uganda

**These policy briefs were written during 2007 and revised during 2008

Table 8: Helpdesk activities during the time period 2006 - 2009 (September)

Activities	2006	2007	2008	2009 (Jan-
------------	------	------	------	------------

²⁵ The Environment and Climate Change Policy Briefs are approximately 15-25 pages. It takes about 2 weeks work to compile each report. Additional time includes preparatory work, follow-up e.g. commenting on draft cooperation strategies (including Project Document 1, PD1) and results matrices, presentations of findings at Sida and dialogue with Sida, participation in strategy writing workshops (“skrivarkonferenser”), stakeholder meetings (“intressentmöten”) etc.

				Sept)
Support in Cooperation Strategies	19 (incl. 7 env and cc policy briefs)	23 (incl. 7 env and cc policy briefs)	22 (incl. 16 env and cc policy briefs)	9 (incl. 6 env and cc policy briefs)
Methodological development and advice	22	30	17	20
Training and communication	9	8	7	18 ^a
Methodological dev. in international processes^b	18	17	17	7
Project management; Ext Actors;	4	3	No Sida requests/activities during the time period	No Sida requests/activities during the time period

^aIncluding Climate Change training workshops in **Bolivia, Mali, Burkina Faso, Kenya (Kenya/Somalia** (bilateral); and **Sub-Saharan Africa** (regional/REED)) and **Cambodia** (regional)

^bPrincipal collaborating partners: World Bank, OECD DAC, EC/EU, Netherlands Commission for Environmental Assessment (NCEA), Poverty-Environment Partnership (PEP), DfiD, Danida, GTZ, UNDP and UNEP; WWF Macro-Economic Programme Office, World Resources Institute (WRI)

This table indicates activities the External Expert Advice for Environmental Economics (helpdesk) has been involved in during the timeperiod 2006 – 2009 (Jan-Sept). Please note that the stated activities vary considerably in time and work effort. For example, one activity under *Methodological development and advice* is the main authoring and coordination of the OECD-DAC report “Greening Development Planning”. Another example under the same heading (*Methodological development and advice*) is comments provided on the African Centre for Technology Studies (ACTS) Strategy 2009-2013. Although grouped under the same heading, these two activities vary considerably in terms of work effort and time. This is not reflected in the table.

Some of the activities under Methodological development in international processes are short term inputs e.g. written comments on a new ToR for a study on budget support (Integrating environment in budget support), or input to a meeting on country level environmental assessment (OECD), whereas others are longer-term efforts to formulate new guidance or work methodologies on themes identified within e.g. OECD DAC or Poverty-Environment Partnership.

Key reports produced

The following are key reports (or co-authored) by the External Expert Advice for Environmental Economics 2006-2009

1. OECD DAC Applying Strategic Environmental Assessment; Good-Practice Guidance for Development Co-operation (contribution) (2006)
2. OECD DAC Greening Development Planning: A review of country case studies - A Review of Country Case Studies for Making the Economic Case for Improved Management of Environment and Natural Resources (2008)
3. OECD DAC Natural Resources and Pro-Poor Growth (contribution) (2008)
4. Integrated Economic Analysis – Mali (2008)
5. Economic Growth, Environment and Climate change (2008)
6. Ukraine: Summary of Environmental and Energy Policies (2008)
7. Economic Growth, Environment and Climate Change (2008)
8. Conceptual Analysis and Evaluation Framework for Institutions Centered Strategic Environmental Assessment (2009)
9. Mapping of donor agency training initiatives on climate change (2009)
10. Guidance on Environment and Climate Change Analysis in Sida's Integrated Poverty Analysis (2009)
11. Environment and climate change financing and the role of development cooperation (2009)
12. Sida Bilateral Support to Environmental Capacity Development – Overview and Lessons Learnt (draft) (2009)
13. Guidance on Environmental and Climate Change indicators for Cooperation Strategies (2009)

In addition:

The External Expert Advice for Environmental Economics also collaborates closely with the Environment for Development (EfD) Centers.

EE Helpdesk activities with EfD centers during 2006-2009 (Jan-Sept) include:

1. collaboration and joint analysis on the development of the following cooperation strategies:
 - Ethiopia, Lake Victoria, Tanzania, Kenya, Rwanda, Botswana, Namibia, South Africa, China, Regional Latin America, Regional Africa
2. Cooperation on enhancing policy advice based on research, with presentations and/or workshops in Cape Town (2007), Gothenburg (2008), Beijing (2008), Kuriftu/Ethiopia (2009), Naivasha/Kenya (2009)
3. Evaluation of Kenya's Forestry Sector reform

Staff from the EE Expert function also conducts Policy advice-courses for the students in the Sida-funded Ph D program in order to enhance their skills in providing research-based policy advice, and interact efficiently and constructively with planners and decision-makers.

The Helpdesk's share of the budget during the period under review has been about 9%. In terms of costs it has increased from SEK 1.4 to 2.8 million during the same period. For the year 2007 and 2008 the cost per man-hour was estimated by the Helpdesk to be in the order of not more than SEK 400. A consultant would charge at least SEK 800 per hour and in this respect the Help desk is clearly cost effective.

Sida suggested that we should compare these costs with that of Sida employees. To this end the Personnel Department was contacted. A rough estimate suggests that the hourly cost of a Sida employee is about SEK 500.²⁶ The figures are of course very rough approximations.

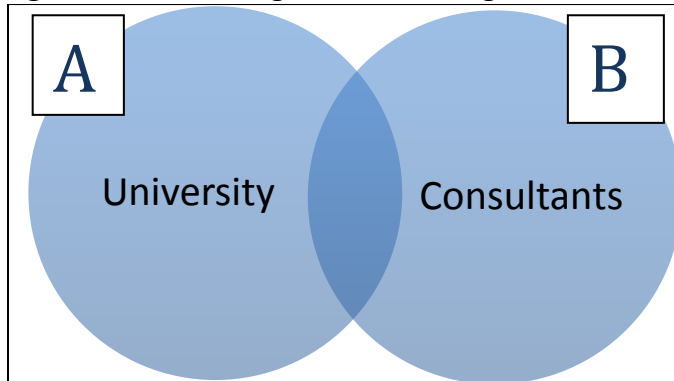
Practically all of the persons interviewed, some of them a bit skeptical about Helpdesks in general, had the view that the Helpdesk in environmental economics had been very useful and should be continued. Some of the interviewed also recommended, that it would be better to employ the persons at Sida. This would among other things make it easier to deal with borderline cases of Government policy issues (myndighetsutövning) and the role of a university.

Even though there may be good economic reasons to have this Helpdesk function within Sida, there are constraints. The total administration costs of Sida are very limited. To employ these UoG people would mean that other important tasks would have to be reduced by the Sida staff. So the cost estimates do not permit any final answer.

The Helpdesk perform a unique function and the cost estimates do not reflect the economic benefits. It can be argued that the benefits produced are much higher than the costs. On this account the Helpdesk is very cost effective (efficient). This raises an important question – can the resources allocated to the Helpdesk produce more benefits. To this end we have developed a simple model.

²⁶ Assuming a monthly salary of SEK 35 000 and social costs to be 17 000 and the same figure for overheads such as office space, phone calls, copying and travel. The total would be in the order of SEK 69 000 per month. In making cost estimates the range of effectively worked hours range between 1200 and 2200 per year. The personnel person suggested that 1 500 hours would be reasonable to use. Then that means an hourly cost of SEK 552.

Figure 3a: Illustrating how conflicting interest can be visualized.

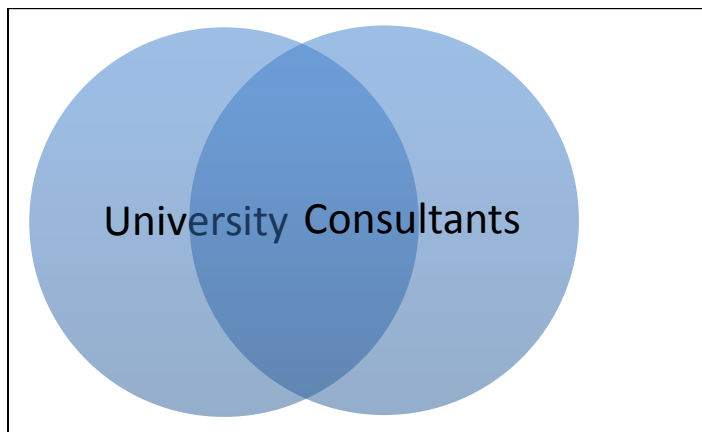


The two circles describe the area of a University (A) and the areas of Consultants (B). There is an area A and B where the two circles overlap. Most consultancy companies would most likely argue that the reality is the following, see Figure ?? below.

On the bottom line this is a policy decision and lies outside the ToR.

The Team has the impression that in some cases the University is performing functions which could be left to private companies, even though the financial costs would be higher. This would enable the Helpdesk to generate more benefits, for example extending its services to EfD Centres.

Figure 3b: Illustrating how conflicting interest can be visualized.



Policy Briefs

Both the Helpdesk and the EfD produce “Policy Briefs” and they are targeted at different audiences. The Team has read some of the publications of both. In several cases the

publications are much more than Policy Briefs – in fact some could probably be published in scientific journals. In many cases the Briefs are too long for policy makers. As was said above, some reports obviously do not belong to the realm of consultancy services. An excellent piece of work was prepared by the Helpdesk: “Economic Growth, Environment Change” dated September 2008. It is a review of the scientific knowledge on the subject. This is a type of Study where a University should have a major role. This type of Study obviously would not be within the competence of a private company.

A variety of studies and reports has been labeled as Policy Briefs. For example “Bolivia Environmental Policy Brief: Environmental Sustainability, Poverty and the Nation Development Plan”, dated June 2007. It is doubtful to call a document of 33 pages a Policy Brief. This is a type of study which a qualified consultant would be able to do.

The EEP has produced an excellent document: “Guidelines for Efd policy briefs” from January 2009.

Many “Policy Briefs” are often summary of research and are often of little use to busy policymakers. As an example, the research done by CATIE shows that the entrance fees to National Parks are in the order of USD 9 and that the research revealed that visitor were willing to pay USD 15. This is not highlighted in their Policy Briefs. Moreover, most policymakers would be happy to increase the fees for tourists. Given the fact that there are 20 National Parks in Costa Rica, it would be interesting to know something like: “By raising the entrance fees to USD 15 our 20 National Parks would generate a substantial increase in revenues. Assuming that the number of tourists are X the net increase in revenues would be USD X*6.

Finally it is not an easy task for a scientist to communicate with policy makers.

” To tell you the truth, it was kind of hard for me to let her make changes even though I think they work out well for a policy brief.

It is hard to get away from the researcher’s mode and say things without caveats and without describing the methodology and letting the reader judge themselves.

Having said that, I am very happy about how the brief turned out. ”



ENVIRONMENT FOR DEVELOPMENT (EfD) INITIATIVE CENTERS

The overall objective of EfD stems from the overall objective of the EEP. While specific objectives of EfD Centres are to:

1. Strengthen the capacity of the centre for greater interaction between academics, policy makers and civil servants
2. Mainstream sustainable use of natural resources and the environment into strategic policy processes and documents.
3. Support and improve the policy relevance of the undergraduate and students and equip civil servants with the necessary tools of environmental economics for improved policy analysis and
4. Upgrade the skills of research fellows with up-to-date theories and tools and to strengthen the research capacity of Environmental Economists so that more research is done and disseminated to policy makers and other stakeholders. At present there are six Centres:
 - China
 - Ethiopia
 - Tanzania
 - Kenya
 - South Africa
 - Costa Rica (Central America)

These Centres have different histories and their socio-political contexts vary greatly. For this reason it is necessary to describe and evaluate each Centre, while at the same time ensuring that the over-all focus on the EEP as a whole does not get lost.

The consultant visited three centers in Sub Saharan African region i.e Ethiopia, Tanzania and Kenya. China, South Africa and Costa Rica centers were not physically reached but evaluators met the coordinators and other members of staff at their annual meeting in Naivasha, Kenya from 4 - 7 November 2009. The Centers growth in terms of staff, facilities and activities differ. The six EfD Centers growth depend on many factors such as;

1. When the Environmental Economists graduated from UoG and returned to their respective countries.
2. What kind of research, training activities and policy advices they have undertaken either individually or as a team in their countries or in collaboration with other environmental economists worldwide.
3. What capacity and number of staff in the area of environmental economics and supporting staff
4. The relationship between academic and policy making institutions in the individual countries.

There are 20 Environmental Economists who graduated from UoG and either returned to their respective countries or relocated. The table below is names of PhD Graduates of Environmental Economics from the first batch from 1998 to 2009. Details of their thesis topics and where they are currently located are in Appendix IX.

Table 9: Environment Economics Unit PhD graduates

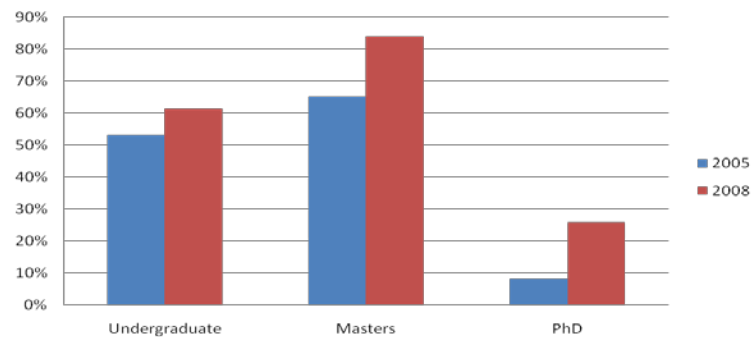
No	Name	Year of graduation	No	Name	Year of graduation
1.*	Alemu Mekonnen, Ethiopia	1998	11.	Wilfred Nyangena, Kenya	2006
2.*	Tekie Alemu, Ethiopi	1999	12.	Wisdom Akpalu, Ghana	2006
3.*	Adolf Mkenda, Tanzania	2001	13.	Jorge Garcia, Colombia	2006
4.	Francisco Alpizar, Costa Rica	2002	14.	Mintewab Bezabih, Ethiopia	2007
5.	Edwin Muchapondwa, Zimbabwe	2003	15.	Martine Visser, South Africa	2007
6.	Hala Abou-Ali, Egypt	2003	16.	Marcela Ibanez, Colombia	2007
7.	Mahmud Yesuf, Ethiopia,	2004	17.	Precious Zikhali, Zimbabwe	2007
8.	Eseza Kateregga, Uganda	2005	18.	Ping Qin, China	2007
9.	Minhaj Mahmud, Bangladesh	2005	19.	Jiegen Wei, China	2007
10	Razack Lokina, Tanzania	2005	20	Miguel Quiroga, Chile	2010 (expected)

***Efd pioneers and staff of Efd Initiative Centers**

The Efd initiative therefore started to take shape in all the countries under this evaluation well before they were formalised into Centres after an agreement between EEU and Sida in 2006.

Out of which 3 are pioneers of Efd Centres while others are staff of Efd centers or still have strong links to EE research (Efd associates) in their own countries or abroad. The above 19 graduates are active in training, research and policy outreach.

Figure 4: Alumni's Teaching and Research Activities
On what level do you teach? (2005 and 2008)



Source: Follow Up Survey of EEU Alumni in 2008.

The extent of their involvement in EfD – training activities is as shown in the Figure above.

The EfD Centres

Here we present a brief of each centre while detailed description of the findings is included as Appendixes II to VII.

Ethiopia: EEPFE, (Environmental Economics Policy Forum for Ethiopia)

Environmental Economics capacity building, research and policy outreach activities in Ethiopia started with the graduation from UoG and return to Ethiopia of Dr. Alemu Mekonnen (1998), Dr. Tekie Alemu (1999) and later Dr. Mahmud Yesuf (2004). The above researchers started research and capacity building in Environmental Economics way back in 1999. Both were based at the Department of Economics, Addis Ababa University (DoE-AAU). Initially, the training and research activities were administered from the DoE-AAU. With the support of Sida and EEU staff, Dr. Gunnar Köhlin, they formalised their network of Environmental Economists and established Environmental Economics Policy Forum for Ethiopia (EEPFE) in 2004. It appears as if the experiences of Ethiopia have served as a model for the development of the other EfD Centres.

This forum is implementing the current Environment for Development Initiative in Ethiopia. It is now known as the EfD Centre /Environmental Economics Policy Forum for Ethiopia (EfD-EEPFE). In order to efficiently administer the activities of the forum and strengthen policy outreach a more strategic host institution was sought. EEPFE- EfD centre is now hosted as one of the 6 projects at the Ethiopian Development Research Institute (EDRI).

The centres notable contribution on research is on the country's Sustainable Land Management (SLM) survey program. The general objective of this survey is to study household behaviour regarding sustainable land use. The importance of this policy relevant research is further discussed in Appendix II.

Kenya: Environment for Development Kenya

The development of EfD-Kenya Centre is due to the presence and initiative of Dr. Wilfred Nyangena who graduated from UoG in 2006. Closely assisted by and Dr. Mahmud Yesuf from Ethiopia who graduated from UoG in 2004 and was working with EfD Ethiopia before joining EfD Kenya a year ago to strengthen its EE capacity at EfD Kenya. The Efd Centre in Nairobi formally started in May 2006 although preparations started in 2005.

EfD – Kenya is hosted at a well known and well respected public policy think tank. KIPPRA is a semi- autonomous public institution established to support the public policy process in Kenya. A perfect place for policy outreach activities of EfD- Kenya Centre in its objective of conducting high quality research and policy analysis and in building capacity of public officials and other stakeholders.

EfD –K has been instrumental in discussing the sector budget report on Environment, Water and Sanitation during a public hearing part of the budgeting process. EfD Kenya reviewed the above report and prepared for face-to-face plenary presentations to the public. Their review on policy matters was well received in Ministry of Finance.

Tanzania: Environment for Development Tanzania

The Activities of EfD- Tanzania Centre were initiated by Dr. Adolf Mkenda, who graduated from EEU/UoG in (2001). He is currently Associate Dean (Academic) and head of the Department of Economics, Faculty of Arts and Social Sciences at the University of Dar Es Salaam. Dr. Mkenda has become a highly regarded economist in Tanzania. He was followed by Dr. Razack Bakari Lokina, who graduated from UoG.

Dr Lokina is now the EfD Coordinator and Lecturer at the Department of Economics, University of Dar Es Salaam. Dr. John Mnduma is also one of the first Environmental Economist staff members of EfD- TZ Centre. He is currently on secondment and acts as an adviser to Environment and Natural Resources Division at the Vice President's Office. His position is considered to be strategic for EfD's objectives on policy outreach.

The EfD Tanzania is located within the Department of Economics at the University of Dar es Salaam, the largest and oldest university in the country. EfDs location within one of the leading

economics departments in Sub Saharan Africa was not a coincidence. EfD centre staffs are also very important members of staff with strong roots at this department.

The EfD- Tanzania centre is also surrounded by other important research institutions and centre's at the University. These are, The Institute of Resource Assessment and The Stockholm Environment Institute - Tanzania Centre (SEI-TZ) where the evaluators observed a strong collaborative culture in research and consultancy assignments awarded to the University.

EfD Tanzania is one of the countries in the programme which has not yet registered a big impact on policy outreach in terms of number of policy briefs published and distributed. However, notable contribution has been made by EfD-T on policy advice on Forestry Management issues through consultation, research, presentation and production of a policy brief on "Determinants of Successful Participatory Forest Management in Tanzania". A visit to National Environmental Management Council (NEMC) showed how as a government agency they have taken every opportunity to gain from the capacity available at the EfD Centre in Tanzania in the development of the NEMC's research Agenda- 2008-2013, where one of the priority areas was Environmental Economics.

Central America: SEBSA, (Socioeconomics of Environmental Goods and Services)

Environment for Development centre in Central America is the baby of Dr. Francisco Alpízar who graduated from UoG in 2002. Dr. Alpízar is also a Program Director of the Latin American and Caribbean Environmental Economics Program (LACEEP) (www.laceep.org). LACEEP has been in operation since 2003. To establish the EfD CA center Dr. Francisco Alpízar was closely assisted by Dr Juan Robalino an Environmental Economist who received his Ph.D. from Columbia University in May 2005. He is a research fellow at EfD and Deputy Director of the Latin American and Caribbean Environmental Economics Program.

The EfD - Central America is hosted at the Tropical Agricultural Research and Higher Education Center (CATIE), an international institution focusing on research and graduate education in the agricultural sciences and natural resources. AfD – CA is placed under Socioeconomics of Environmental Goods and Services (SEBSA), a research group within CATIE. SEBSA with it's an interdisciplinary team, SEBSA focuses on analyzing and facilitating innovative mechanisms for the proper management of natural resources.

Their research interests cover Central America but also other countries in Latin America. The regional coverage therefore demands a good understanding of not only country specific issues and sectors, but also on those that cut across the region.

The Centre in Central America has highly competent environmental economists. The capacity is reflected in the outputs since its establishment on research projects, a good number of policy briefs and other publications at top scientific journals. Central American EfD Centre has the longest list of policy papers as a result of many research projects conducted by the staff through LACEEP and now EfD.

China: EEPC, (Environmental Economics Program for China)

The Environment and development center in China known as Environmental Economics Program in China (EEPC) is led by Professor Jintao Xu. This is the only Centre whose coordinator is not one of the UoG's EE pioneers or a product of UoG. Jintao Xu is a professor of Natural resource economics at the College of environmental Sciences and Engineering, Peking University with a wide experience in teaching, research and publishing in international journals like Environmental and Development Economics, World Development, Land Economic, Ecological Economics etc.

The initiative to start the Centre started in 2005 and was officially launched in October 2007. The Centre is hosted at the College of Environmental Sciences and Engineering, Peking University (PKU).

Major environmental issue for China is soil erosion and flooding. Tree planting was Chinas solution but there was no systematic analysis and assessment of the poverty and environment as a result of poor forestry management, erosion and flood. Notable contribution for EfD-China regarding research to policy outreach is on a rigorous field survey and quantitative analysis on forestry management in China.

The research results by EEPC researchers have provided forest authorities rich information on collective forest tenure changes. EEPC was also invited by the State Forestry Administration to study state forest reform. Indications of success include invited policy briefs, lectures in government held training workshops, and policy conferences jointly held by EEPC, SFA, the World Bank and other international NGOs.

Due to a time constraint, it was not possible to investigate in depth the impact of policy making. However, the close connection between EfD collaborators and key national public institutions suggest that there has been a significant on policy making.

South Africa: EPRU (Environmental Policy Research Unit),

The EfD Centre in South Africa is known as the Environmental Policy Research Unit (EPRU). EPRU is an independent research unit under the Southern Africa Labour & Development Research Unit, the School of Economics, and University of Cape Town (UCT). EPRU is coordinated by Dr. Martine Visser, a UoG graduate. She graduated from EEU/UoG in 2007 after successfully defending her thesis titled, "*Fairness, Reciprocity and In equality: Experimental evidence from South Africa*",

Hosted by the School of Economics, and University of Cape Town (UCT, a prestigious University in South Africa, EPRU – EfD South Africa staffs are proud to be associated with a strong academic department at the University of Cape Town.

The Centre's notable contribution to policy outreach is when the government approached EPRU to consider the feasibility of using a significant portion of anchovy resource for human consumption²⁷. The study was commissioned by the Director of Scientific Research at Marine and Coastal Management. The Centre reports that this cooperation gave an opportunity for both junior and senior researchers of networking and building own contact base with policy makers. In addition the research's interdisciplinary nature enlarged research potential and interaction between the local fishing industry, a scientific monitoring group (CapFish), Marine and Coastal Management and EPRU.

Performance Assessment of EfD Center Activities

The central activities of the centers are **Administration, Academic Training and Research and Policy Outreach**. Below a brief assessment of the performance of the main activities is given. Reference to Appendix VIII of EfD in numbers for each of the activity discussed below is necessary to get the understanding of the performance during the project period. However not all performance indicators for 2009 were available because the Centers have not prepared the 2009 reports.

Administration

It is reported that centers were highly competitive in the context of potential institutions. The choices were also based on existing potential of human capital, available institutional structure and domestic interest and ownership. The guiding principle for all was to achieve maximum policy impact for the money spent.

In both centers, the host Institutions as expected have provided resources in terms of financial and staff administration, infrastructure and supported the implementation of the three other

²⁷ There would be interesting collaborative research in this area. Chile, Peru, Namibia and Angola have very large catches of anchovy.

activities. It was not possible for the short time and contacts made for the consultants to judge whether there was an added value to be hosted in an academic institution (Tanzania and South Africa) or a policy institute (Kenya, Costa Rica and Ethiopia).

The quick assessment is that they both operate professionally and efficiently. The administration by all host institutions provides the support needed to bring the expertise of fellows and other academic professionals who work in Centers to address environmental economics on various natural resource issues. However the Centers located at the Universities appeared to be relieved from the work load and dual roles that arise by locating away from the University. While EfD Staff located away from Universities were clearly stressed having to move between two institutions.

Sustainability of this administrative support in both centers seems to be dependent on external support. Centre Coordinators were optimistic that if Sida funding ends they might be able to source out funding from other sources.

The centers are growing in terms of staff both full time and part time. They also have a good number of local and international research associates. These associates work very closely with the Centre staff in research and policy outreach. Such collaborative research with renowned international, regional and domestic researchers is the main factor for quality publications.

Academic Training

Centers demonstrated that they are offering academic support and training in Environmental economics that would have never happened without EfD support. The view is that it is just started and it would be fair to consolidate after the initiative which has started to attract young scientists.

There is quality and quantity difference from 2006 to 2009 on number of graduate, Masters and PhD students. The total number of students opting to do their theses on environmental economics is rising. In addition they choose policy-relevant topics identified as priority research areas by EfD and policy stakeholders. All centers have junior faculty members who are working directly on research and they are the ones who seem to give 100% time to EfD activities when given a chance.

Policy Outreach

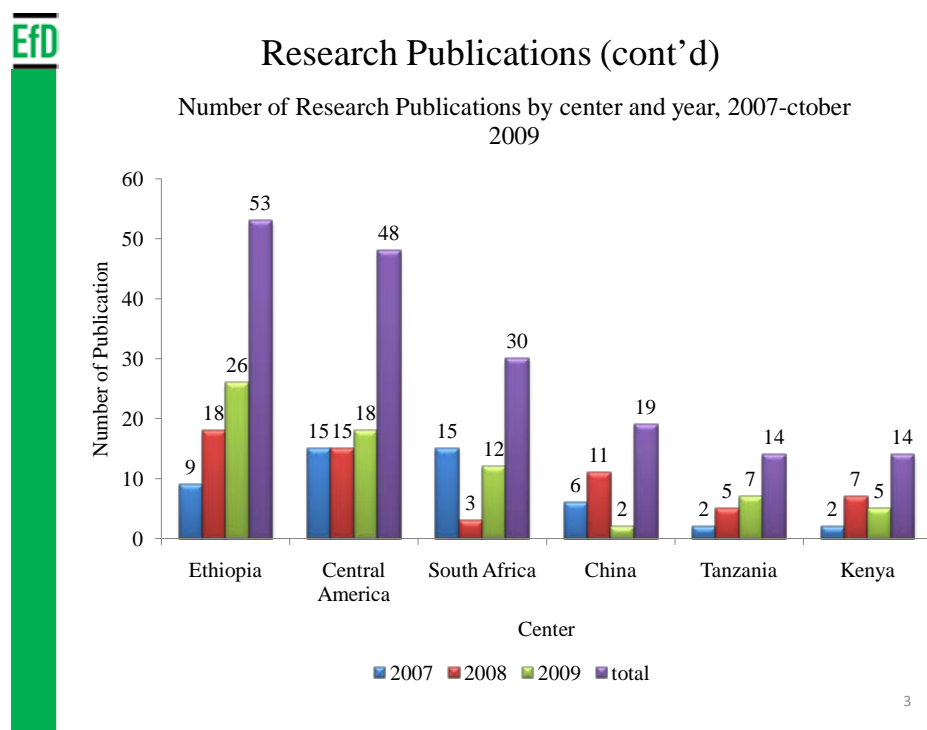
The evaluation found evidence of many dissemination forums for research findings and policy reviews. This is evidence of Center staff and government official participation in policy processes. Government officials and other stakeholders' attendance to academic meetings and seminars organized or supported by EfD, are likely to yield potential policy influence. The successful cases on policy outreach presented in each centre (Appendices II – VII) are evidence of this potential.

It is a research challenge to assess the effects of research on policy making. As to whether there has been any impact in the policy strategies to improve environment, economic growth and poverty reduction of the people the evaluation has no concrete indicator. However the evaluation believes that this is one of the long term performance indicators that cannot be measured in three years. Other qualitative measures and processes as an outcome of this policy outreach can be used instead.

Research

EfD research programs showed a strong research output measured by numbers of papers produced. In some case they showed synergies with policy making described above. But the best measure of their quality is in being published in international journals and publications produced between 2005 -2009.

Figure 5: EfD Research and Publications by Centre by Year (2007 – 2009)



During the visits and discussion with EfD staff, the consultant noted a similar commitment of staff in the centers in keeping contact with EEU, improving the knowledge gap, producing quality research and disseminating research results in different forms to their stakeholders. This observation was confirmed at the EfD annual meeting. The EfD annual meeting in Naivasha was very professionally organised and conducted. In the meeting a high quality and informed

presentation of environmental economics issues in their discussion papers, policy briefs and research proposals was made.

A strong networking process on possible collaborative research activities and policy advice strategies was observed among project staff and their various partners and stakeholders who attended.

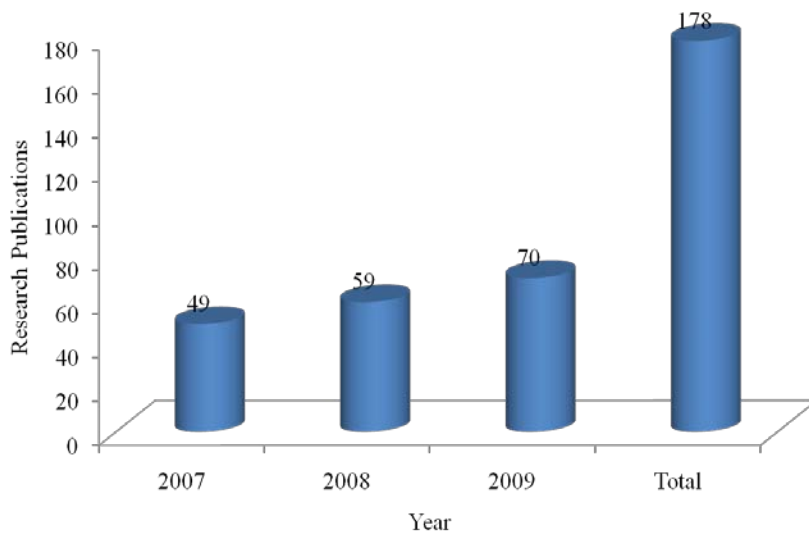
The EfD-Centre staff and associates believed they choose research topic that are relevant to the countries needs and proprieties. However the research selection process takes time and at some point the Centers lose control on the final decision regarding a priority issues. The basis for selection becomes more on the scientific quality of the presented proposal. The importance of relevancy may sometimes be lost. Although they do not wish to compromise on quality but they would like to see a more participatory decision at EEU level as to which research proposal should be funded. As it is now, the coordinators play a dominant role. In a longer perspective, local research committees should be established.

Regarding the difference in research activities before and after EfD, the Consultant is of the opinion that it was not necessarily lack of research funds but researchers having access to limited and competitive (e.g Sida – former SAREC) research funds which is made available to the Universities and Research centers. However EfD Initiative has brought together in a structured way academicians trained in the area of environmental economics and afforded funds for research. In addition EfD funding gives incentive to the researcher - a top up to his salary for doing research. The evaluation sees this incentive as the only way to reduce the need to go for other forms of consultancies which may not necessarily have any academic value to the researcher and the department.

Number of Research Publications (=Peer reviewed articles + Book chapters + Discussion papers) in the years since EfD Establishment is as shown in the chart below.

Figure 6: EfD Total Research Publications (2007 – 2009)

Research Publications by year, 2007-October 2009



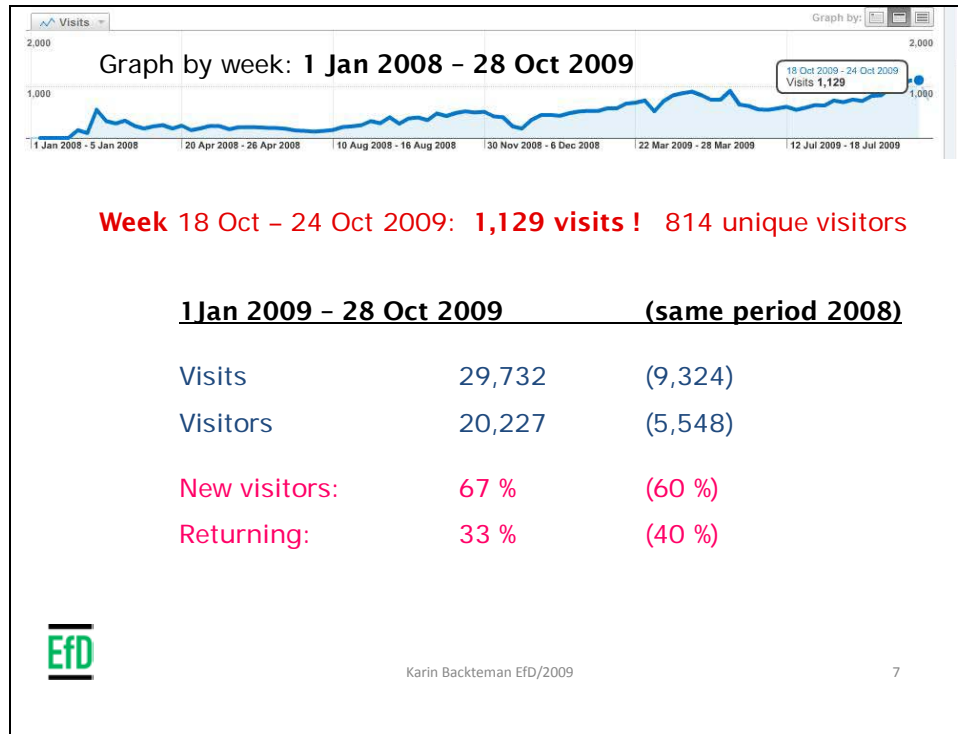
Source:

Centre staff fears that if the current funding and incentive to research dries out researchers at the Centers might fall back to non-research activities. They might be might be absorbed into low level technical advice and administrative tasks or consultancies.

Dissemination

Visits and downloads from the EfD website is used in this evaluation as a measure of the dissemination of their output to the public.

Table 10: Visitors to the EfD Website



Within one year there has been a tremendous increase on visitors to EfD website. The users not only visit but also download the material posted.

The visitors may not be known but the consultants assume to be dominated by students and professionals in environmental economics. The following tables show the most downloaded documents7 publications and most visited pages on the EfD Website.

Table 11: Most downloaded sites

1. Poverty and Land Degradation in Ethiopia (<i>Concept Note</i>)	352
7,000 downloads 2009 to date	
2. Benefits of Organic Agriculture as a Climate Change Adaptation and Mitigation Strategy for Developing Countries (<i>EfD Discussion Paper by Muller</i>)	331
3. Rural Livelihoods, Poverty, and the Millennium Development Goals, (<i>EfD Discussion Paper by Bluffstone, Yesuf, Bushie, and Damite</i>)	310
4. Forestry Research activities of Forestry Research Center Workshop on “policies to increase Forest Cover in Ethiopia” (<i>Presentation by Gezahgne, 2007</i>)	310
5. PFM in Oromia and SNNP regions of Ethiopia, FARM-Africa/SOS Sahel, 2007, (<i>Presentation by Teklearegay Jirane, Tsegaye Tadesse and Zelalem Temesgen</i>)	236
6. Curriculum Vitae of Mahmud Yesuf	225
7. Policies to increase forest cover in Ethiopia, 2007 (<i>Policy brief</i>)	219
8. Are Agricultural Extension Packages What Ethiopian Farmers Want? <i>Working Paper by Carlsson, Köhlin, Mekonnen, Yesuf,</i>	218
9. Curriculum Vitae of Francisco Alpízar	202
10. The Kenya Vision 2030 and the Environment (<i>Discussion paper by Nyangena</i>)	196

Table 12: Most Visited Sites

Most visited pages 1 Jan – 28 Oct 2009		Same 2008	
1. First page	7,135	1. First page	4,782
2. Log in	2,033	2. Log in	1,344
3. centers/ ethiopia	1,100	3. centers/ central-america	807
4. centers/ central-america	1,089	4. efd-initiative/ people	761
5. resources/ job-openings	955	5. research/ researchers	741
6. research/ publications	945	6. centers/ ethiopia	700
7. centers/ tanzania	776	7. centers/ centr-ame/people	682
8. centers/ kenya	770	8. research/ researchassociates	653
9. efd-initiative/ about	761	9. research/ publications	649
10. centers/ china	705	10. news-press/ job-openings	635
11. news-press/ workshops-etc	686	11. centers/ kenya	629
12. centers/ ethiopia/people	665	12. centers/ china	610
13. centers/ south-africa	656	13. news-press/ workshops-etc	578
14. centers/ centr-ame/people	656	14. efd-initiative/ about	506
15. centers/ news/un-expertgroup	625	15. centers/ kenya/people	481

It also could be clients who seek the service of Efd staff (visit to centre people) especially when an Efd Staff CV is visited. The Minister for Agriculture and Rural Development in Ethiopia informed the consultant that he visits the site to make reference to research results and to be informed about natural resource issues in Ethiopia.

Networks Partners and Collaborations with Efd

Efd work closely with partners at international level and collaborates with regional networks. RFF, Resources for the Future in Washington DC, is an important partner of the Efd initiative. RFF's research fellows work closely with their counterparts and RFF's communications staff helps to disseminate the new centers' research products. Some of these with a bearing on Swedish Development Cooperation are;

LACEEP (Latin American and Caribbean Environmental Economics Program) is a research capacity building program focusing on the use of environmental and natural resource economics tools and concepts. Researches in Universities, Ministries, NGO's, in the Latin American and Caribbean region, learn the art of applied scientific research. It collaborates with Efd -CA

CEEPA (Research Grants for researchers Studying Environmental Economics Issues in Africa) The mission of CEEPA is to enhance the capacity of African researchers to conduct environmental economics and policy inquiry of relevance to African problems and increase the awareness of environmental and economic managers and policy makers of the role of environmental economics in sustainable development. This regional centre collaborates with all Efd's.

AERC: African Economic Research Consortium (AERC) is where Efd training activities have an impact.

The majority of the Efd Scholars consider these as making a significant in funding for young scientists.

Conclusions and Challenges of Efd Centres

A major threat to the activities of the centres is ensuring sustainability including funding. One respondent to our question on sustainability commented that "Efd will melt away if Sida funding ends". However the fact that Efd-centres are located in respected and sustainable institutions, it will be possible to transform Efd centres into projects within the Institutions or Units within Departments. A challenge to all the Centres would be in maintaining a critical mass of qualified research staff. Some of the staff are highly qualified and widely sought for

consultancies and can easily be recruited by other academic and research institutions for a better pay.

Environmental and resource economists are few and highly competitive in both countries where the centres are located.

It is not easy to sustain the existing few researchers or attract new researchers from the market unless EfD Centres are able to pay a competitive remuneration or pay additional incentives.

At any point in time high quality researchers in each centre should be sustained. Lack of capacity may slow down the pace of research output delivery and quality policy advice.

Use of foreign experts to boost local capacity is a short term solution as it is subject to availability of funds,

Compilation of data compendia on a wide range of environmental and natural resource management issues in the country is very expensive but once data is available it can be easily updated.

A challenge cited by the project staff is in ensuring continuity of activities despite possible changes in the political environment and interest of the government. Last but not least the challenge is in keeping the Centres' integrity and fighting corruption.

Main Findings of the Programme

The support to the University of Gothenburg, Environmental Economics Unit at the Department of Economics has been a unique success story. With respect to the different components the consultants' major findings are as follows;

1. It's a global programme with a strong focus on Sub Saharan Africa also including China and Costa Rica.
2. **The PhD programme** has trained an important number of PhDs and they have in the majority of cases returned to their home countries.
3. They still maintain link to the academics world and as far as we know many are working in Environmental Economics.
4. However as already mentioned in the previous evaluation in 2006, the PhD programme is not sufficiently focussed on EfD countries. It is not totally out of balance but there is a slight contradiction regarding choice of providing scholarships. We expected it should be based on countries where EfD centres exist.
5. Only two out of 10 students are female.
6. The **Help Desks** function is very much appreciated by Sida staff members. There is also an important interface between the help desk and various Swedish Embassies

- surprisingly enough the interface with the various EfD centres has been relatively weak.
7. The extension services provided by the Help Desk are unique. The Consultant is of the view that confining the services to Sida is limiting its usefulness to development cooperation at large.
 8. One aspect which has completely been forgotten by EEU and the Help Desk is the interface with “Swedish” companies e.g. Vattenfall, Tetrapack and SKF.
 9. PhD graduates in Environmental Economics from UoG have been in contact with each other even before 2006. **The Environment for Development (EfD) Initiative Centres** was a natural development of these contacts.
 10. Apart from research on specific national problems, collaborative and high quality research programmes are emerging. In this endeavour the EEU is performing an important role, such as highlighting research relevant to poverty eradication.
 11. While it is clear that the EfD centres have had an impact on policy making, the qualification is difficult to assess.
 12. EfD centres have created space for Environmental Economists and have contributed for retaining trained environmental economists in their own countries.
 13. The EfD programme has developed unique incentives for high quality research.
 14. The intangibles such as personal relationships – “we are family” have played an important role in the EEP/EfD
 15. While the Holmberg evaluation from 2006 highlighted the continuity of staff both at Sida and the EEU this situation has changed rapidly due to reorganisation of Sida and the retirement of key persons committed to environmental issues.

EVALUATIVE CONCLUSIONS

As is stated in the Sida Manual the Consultant should make an: “Assessment of the intervention and its results against given evaluation criteria, standards of performance and policy issues”. The conclusions below will deal with the Programme as a whole.

Most of the evaluative have already been mentioned. Here the Consultant will provide a summary of these.

Outcomes – all Programme components have generated significant outcomes such as number of peer reviewed articles, PhD students graduated, practical advice to Sida on environmental issues.

Cost effectiveness – an over-all assessment is that the EEP has been very cost-effective, though tentatively, there may exist areas where the it would be possible to cut costs.

Relevance – in the context of Poverty eradication the EEP is very relevant, though the EEP allocation of resources could improve.

Impacts – the EEP is already having an important impact as is discussed elsewhere in this report. The present impacts are the results of more than 20 years of dedicated work, by EEU staff and increasingly by the members of this evolving global net work of environmental economists. The capacity is growing rapidly and if well cared for the future impact can become significant on a global scale.

Sustainability – As discussed elsewhere, the EEP would continue without Sida support. In this respect it is sustainable.

These are the major Evaluative conclusions. The Consultant has highlighted the issue of **corruption** and would like to discuss it in this context of Evaluative Conclusions.

According to Transparency International there is “rampant corruption” in practically all Sida priority countries has led to a strong focus on financial reporting and externally audited accounts. As it is now, the reporting procedures are such that each year there is an annual report to Sida on activities, results and plans. The financial reports are delivered separately. Thus, there is no analysis of the results and the related costs. Still, the way the EEP operates, the Consultant has become convinced that there are no major problems of corruption.

RECOMMENDATIONS AND LESSONS LEARNT

GENERAL RECOMMENDATIONS

The Consultant strongly recommends Sida to continue supporting the EE Programme because the benefits, most probably, are much greater than the costs. In this vein an annual cost of roughly SEK 35 Million or more is recommended. Should Swedish Universities establish tuition fees on non-European students, it is recommended that Sida finances these fees. Many LDCs have the restructuring of the Governments high up on the agenda. This means that there will be a market constraint for PhD graduates. There is an inherent danger that the Programme becomes donor driven.²⁸ The consultant recommends that the level of intake to the PhD programme should be dependent on the one hand the capacity of EEU and on the other hand the effective market for environmental economists.

In order to enlarge the community of environmental economists, a continued and expansion of the specialised courses at EEU is recommended, targeting economists such as agricultural economists and development economists. This might become a separate Programme, financed jointly with other donors.

The programme needs to “chat out” the long-term plan for EfD - what should the EEP/EfD be in 20 years? Because making regular updates of the *Strategic Plan* would improve the planning for the next following 4-year planning exercise, such updates are recommended. – For example, if Uganda is to have an EfD Centre, this should be reflected in the intake of PhD candidates already in 2010, and of course other activities as well.

The idea of EEP and EfD centre is good and we propose that towards the end of the planning period 2010-2014 EfD Centres can be expanded to include one or two additional countries. If the idea is acceptable, priority should probably be given to Sub-Saharan African countries, where poverty is widespread and the consequences of climate change, therefore, will be dramatic.

The policy making functions in environmental and development economics needs to be strengthened within the Governments. Unless this is done the full, and growing, capacity of the Centres cannot be fully utilized. The Consultant believes that an upgrading of the analytical skills of public employees is needed and recommends Sida to investigate the matter further. The AERC MA programme graduates highly qualified economist and several of the PhD students have graduated from this AERC Programme. In this context Sida might consider to revisit its support to AERC and the EEP and other economic programmes including University support.

²⁸ It can be argued that too much focus is laid on longer term climate change and too little focus on other very important issues such as water.

It is further recommended that the Extension activities of the Helpdesk also include an increasing role to support the EfD Centres in their policy outreach roles. It is further recommended that the Help desk also establish contacts with major “Swedish” transnational companies, such as Alfa Laval, Tetrapack and Vattenfall.

The development cooperation through the European Union is significant. It is recommended that EEU explores the possibility of obtaining EU financing, not least with respect to the emerging collaborative research programmes. This would also be more in line with the Paris Declaration on development co-operation.

It is recommended that in granting scholarships to the PhD Programme, more focus is given to the existing Centres and to the potential newcomer(s). Also, it is recommended that the gender imbalance is gradually reduced.

Building capacity on Environmental Economics to more Sida’s priority countries where the country development strategy include the support on natural resources and climate change will be an effective way of using the current increasing financial resources pumped to LDCs. The view for EEU and individual centres is to consolidate and expand the programme which formally started only three years ago, the idea to build capacity to put value on environment has increased drastically. The idea of Centre should not depend on graduates from UoG alone, as Environmental Economists are being trained in other Universities worldwide. This issue again raises the question of engaging more donors in some of the components of the EE Programme. It is recommended that the EEP, perhaps jointly with Sida, investigates the possibility of obtaining financing from several donors in a joint support to the EEP as a whole or parts of it.

The centres and countries in this programme do not have the capacity to cover all sectors. Collaborative thematic research programmes in order to learn from each other and to involve other researchers in countries where there is no capacity. It is proposed that the Potential for thematic collaborative research be a criterion for selection of research proposals.

SPECIFIC RECOMMENDATION AND QUESTION MARK

During the meeting with all the Coordinators in Kenya, there was agreement that the book support was very important. This part of the total budget (roughly SEK 17 million) annually, is very small, though it has increased from SEK 73 thousand in 2006 and 135 thousand in 2008. We recommend the EEP to consider increasing this support substantially.

Also emerging from the meeting with the Coordinators was that they had been heavily involved in the revisions of Curricula for undergraduate studies and also with the AERC. The Consultant is of the views that while this is time consuming, the research frontline is expanding rapidly in environmental economics, and for this reason it is recommended that Curricula reviews are carried out regularly.

The Consultant would like to ensure that a sufficient number of MA students study environmental economics. We do not have specific recommendations in this respect, such as providing scholarships. The gender issue is particularly important here. The issue is important and needs to be addressed.

LESSONS LEARNED

1. Capacity building is important but unless the capacity built is maintained this human capital quickly deteriorates. This evaluation has underlined the importance of maintaining the capacity built. This raises another question.
2. The respective countries benefiting from capacity building, the question of their responsibility to maintain the capacity and further develop has not been systematically addressed.
3. There is need to establish long term perspective in capacity building and capacity development.
4. We have learned from the programme that when dissemination is done in a systematic way there can be an impact in policy making.
5. Some of the conclusions emerging from the various research programmes have a direct bearing from poverty eradication, but the political reality of many LDCs, makes it very difficult to implement “pro poor policies”. As Michael Lipton already in 1977 pointed out, there is an urban bias in development. Here the EEP has a special responsibility to focus on the essential issues in poverty eradication.
6. In order for some of the research to have an impact on the actual policy making, donors have to agree. An example here is the issue of fuel taxes and water pricing policies.
7. Last, but not least, economic theory provides useful tools in analyzing capacity building in LDCs.

APPENDIX

Appendix I	Terms of Reference
Appendix II	EfD Ethiopia
Appendix III	EfD Tanzania
Appendix IV	EfD Kenya
Appendix V	EfD Central America
Appendix VI	EfD South Africa
Appendix VII	EfD China

Appendix VIII	EfD in Numbers
Appendix IX	List of PhD Graduates from Göteborg
Appendix X	Some specific information on PhD Graduates
Appendix XI	Persons contacted/met
Appendix XII	References
Appendix XIII	EEU's Suggestions on the Use of Citation Indices
Appendix XIV	EEU's Responses on Cost-Effectiveness