

**IDRC CRDI**

# **Ecohealth Research Awards Program**

## **Tracer Study**

**- FINAL DRAFT -**

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For a complete list of individuals who contributed to the study, see Appendix A.

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## EXECUTIVE SUMMARY

Since 1997, the **Ecohealth Research and Training Awards Program** has supported 48 young researchers in research for development by stimulating the implementation of, and experimentation with, an Ecosystem Approaches to Human Health research framework (Ecohealth Approach) among graduate students in Canada and developing countries. The Awards Program has now been in operation for nearly a decade and is embarking on a process of regional devolution. This study is the first effort to trace awardees and assess the outcomes of the Awards Program. Based on a survey of past and current awardees, the study aimed to: assess the contributions of the Awards Program to capacity building and career development; assess scientific and policy contributions arising from the Awards Program; learn if – and how – awardees are continuing to apply the Ecohealth Approach; determine the overall strengths and weaknesses of the award; and, finally, to offer recommendations to guide future planning of the Awards Program.

### **Results**

The survey results showed that the Awards Program has contributed to capacity building and career development. Some awardees have been very active in producing outputs from their research, and nearly all past awardees have continued to apply the Ecohealth Approach to their work or study. The training component was one of the strongest parts of the award and the network and follow-up efforts were areas of concern.

- (1) Through the training week and fieldwork experience, the program initiated researchers to the Ecohealth Approach. The core concepts of the approach were instilled and the skills required to apply the concepts in the field were developed.
- (2) Awardees have generally been active in presenting their research to public and scientific audiences and in communicating results back to the communities that participated in the research. The level of other outputs from the program has been lower than expected, particularly with regard to theses and policy contributions.
- (3) Most of the past awardees surveyed (88%) have continued to apply an ecohealth approach to their work or studies. Nearly all past awardees surveyed (94%) are currently employed, mostly in universities. Nearly all are engaged in work or study that is linked, directly or indirectly, to their ecohealth training and research.
- (4) The Awards Program has developed and advanced individual careers. It has influenced further research activities and career directions, expanded networks of colleagues and professional contacts, and brought academic and professional opportunities.
- (5) The training component was a critical strength of the award. Also, exposure to an international organization, the material resources provided by IDRC, professional contacts made, and the approach itself were

valuable aspects of the award. Areas of concern were the strength of the network and the lack of field support and follow-up to the research.

## ***Summary of Recommendations***

The feedback from awardees indicates that the program has built the capacities of graduate researchers by inducting them to the ecohealth approach, initiating a network of ecohealth practitioners, and financially supporting the fieldwork component of their studies. After this substantial initial investment, there has been a drop-off in active interest and support from IDRC. Further support and follow-up could amplify the benefits of the program. Some key areas for consideration are outlined here. For further discussion, see *Section VII: Key Findings*.

### ***Field Support***

Suggestions were made by awardees to increase intellectual and technical support to awardees during their period of fieldwork. The capacity to provide mentorship and supervision to awardees, as well as feedback to research reports, should be considered in selecting an institution (or institutions) that will take on the management of the awards program. The Ecohealth PI may also consider the possibility of producing an ecohealth manual, as it is something that has been requested by project partners as well.

### ***Follow-up***

Suggestions were also made by awardees with regard to the follow-up of research results. These included: access to awardees' reports and other outputs, publication opportunities, support for dissemination of results in the communities where projects were based, and a follow-up meeting. The additional funding in recent award years for attending a conference has shown to be a valued form of support in this regard. A second Ecohealth Forum in 2008 will also provide opportunities to showcase outstanding ecohealth research. Issues of access to awardee outputs and publication opportunities could be addressed by an IDRC publication compiling key outputs from the Ecohealth Awards Program. It would be timely to have this ready for release at the 2008 Ecohealth Forum.

IDRC staff has expressed concern at the low number of theses that have been submitted to the centre following completion of the award. As IDRC is restricted in its ability to obtain completed theses, the responsibility falls on awardees to submit their theses to the centre upon completion.

### ***The Network***

Suggestions from awardees on how to maintain a more engaged network have included a follow-up meeting and a more active electronic community of ecohealth practitioners. The 2008 Ecohealth Forum will provide a venue for awardees to meet up again and share results and experiences. Awardees have recognized the need for them to use the Ecohealth listserv more proactively. IDRC staff has noted that electronic communities (e.g. D-Groups) have been set-up in the past but are often under-utilized and that further consideration on how these e-communities can be rejuvenated is needed. It has

also been suggested by awardees that more active input of information to the listserv from IDRC would help to strengthen the network. This should be considered in selecting partnering institutions through the devolution process. Suggestions were also made by CTAP on how to augment the Ecohealth Awards web page in order to encourage follow-up contact with awardees.

It was suggested by IDRC staff that a process of compiling and publicizing Ecohealth Awards outputs could be a networking opportunity in itself. It would be useful to consider other publication and dissemination projects that could facilitate networking.

Structurally, the network may be strengthened through regional devolution. By adding nodes and redistributing connectivity, regional institutionalization would shorten (i.e. strengthen) the network, and awardees would also be able to link into the existing Communities of Practice in Ecohealth (COPEHs) in the regions.

### ***Devolution of the Ecohealth Awards Program***

The results of this study underline areas to consider in regionally devolving the awards program. First, the current gap in resources for sustaining an active network of awardees should be considered in selecting an institution (or institutions) that will take on the management of the awards program. Second, consideration is due to the finding that exposure to an international organization was viewed by awardees as a useful aspect of the award. Third, comments were made by awardees that outlined the value of having an opportunity to share knowledge and ideas with other awardees working in similar issues in different parts of the world. This global perspective afforded by the training week by IDRC in Ottawa should be considered in planning the training component of a regionalized awards program.

## I. INTRODUCTION

The **Ecohealth Research and Training Awards Program** has supported young researchers in Canada and developing countries in applying ecosystem approaches to human health research (the Ecohealth Approach). The award is intended to provide a tool to disseminate the basic concepts underlying this research approach, and to build the capacities of young masters and doctoral researchers to apply the approach to their research. The Awards Program is also designed to encourage collaboration with the institutional partners who will be the end-users of the research. Each year, the Awards focus on different thematic areas within the ecohealth research paradigm<sup>1</sup>.

From 1997 to 2005, the Ecohealth Awards Program has supported 48 graduate students by providing up to \$15,000 in funding for their research as well as a week of training at IDRC in Ottawa.<sup>2,3</sup> In the previous two years, additional funds of \$4,000 were made available to present findings at an international conference. An evolution of the awards concept and its operationalization has occurred over the last nine years, however, while the provision for an evaluation was included in the original PAD, one was never carried out.<sup>4</sup>

Over the last two years, the Ecosystem Approaches to Human Health Program Initiative (Ecohealth) team has been discussing and exploring the possibility of devolving the program, mainly due to two reasons: first, the project has high work load implications for the team as it is held annually; and second, devolution would be a means of enhancing capacity within southern institutions.

At this crossroads in the implementation of the Awards Program, the team would like to gain awareness of the role and outcomes of the Awards Program, based on the experience of the awardees. This study traces past awardees of the program and also seeks input from the experiences of current awardees. It is hoped that the lessons learned will be useful in guiding future planning for the Awards Program through its devolution process.

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<sup>1</sup> For a list of award recipients and their research topics by year and theme, see Appendix B

<sup>2</sup> Note that there were no awards for 2003 due to the Ecosystems Approaches to Human Health International Forum, held in Montreal, 18 to 23 May, 2003.

<sup>3</sup> Data on awardees of the Ecohealth Awards Program was provided by Centre Training and Awards Program (CTAP). For more information, contact [cta@idrc.ca](mailto:cta@idrc.ca).

<sup>4</sup> Described in Sanchez, Andrés. Rolling PCRs. December, 2004.



## Objectives of the Study

The objectives of the study are:

1. Assess contributions of the Awards Program to capacity building and explore specifically what skills and knowledge were gained by awardees through their award experience;
2. Assess scientific and policy contributions arising from the Ecohealth Awards Program;
3. Learn if – and how – awardees are applying the skills and knowledge gained through the award experience;
4. Assess the role of the Awards Program in supporting awardees` career development;
5. Determine which aspects of the award should be maintained and which aspects could be improved upon. Also, review additional suggestions from awardees; and
6. Produce a report that summarizes these findings and highlights priority elements to be maintained in its future devolution.

## Methodology

The main tool used for the study was an electronic survey designed by the intern in consultation with Ecohealth team members and the IDRC Evaluation Unit. The survey was sent to all 48 past and current awardees of the program, and 27 completed surveys were returned. Once the surveys were returned, the information was processed and analyzed, using the survey questions to guide the analysis. Unclear or incomplete responses were clarified through e-mail correspondence. Details of the methodology are given in Appendix C.

Input was also received from IDRC staff and consultants through individual and group discussions. This input helped to guide the survey design and fed into the recommendations.<sup>5</sup>

## Limitations of the study

Only 56% of the awardees participated in the survey. Further to this, the distribution of respondents by region of nationality and by award year was not truly representative. Details of data quality are given in Appendix C.

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<sup>5</sup> For a list of collaborators, see Appendix A.

## Organization of the report

The report first profiles the respondents by looking at academic background, further study since participation in the award program, and current professional activities, including continued application of an Ecohealth Approach. The outputs of the IDRC-funded research are documented and the factors that have facilitated the application of an Ecohealth Approach, as well as those that have presented challenges are reviewed. Next, the report explores the awardees' experience of the Awards Program, the impact of the award on capacity building and career development, and its strengths and weaknesses as they emerged from awardee feedback. Lastly, the key findings of the study are discussed.

## II. PROFILE OF ECOHEALTH AWARDEES: PAST AND PRESENT

### Introduction

This section reviews the academic backgrounds of respondents, further study since participation in the Awards Program, and current professional activities. It shows that most past awardees are currently employed and have continued to apply an Ecohealth Approach to their research and professional activities.<sup>6</sup>

### Academic Profile

#### *Academic disciplines*

The award is intended to build up the capacities of young masters and doctoral researchers. As to be expected from an ecosystem oriented awards program, recipients have represented a diverse range of academic disciplines.

While only a few awardees shared the same specific discipline, over half of awardees (55.6%) were working towards a degree in social sciences at the time of receiving the award.

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<sup>6</sup> 'Past awardees' refers to those who participated in the program previous to the current 2005-2006 award year.

**Table 1. Disciplines studied by awardees at the time of receiving the award (n=27)**

	No.	%
<b>Health Sciences</b>		
➤ Public Health (2)	6	22.2
➤ Environmental Health Sciences (3)		
<b>Natural Sciences</b>		
➤ Geography (1)	1	3.7
<b>Social Sciences</b>		
➤ Anthropology (1)		
➤ Environmental Studies (2)		
➤ Geography (4)	15	55.6
➤ Health Geography (1)		
➤ International Development Studies (2)		
➤ Rural Economics (1)		
➤ Social Impacts Assessment (1)		
<b>Other</b>		
➤ Agricultural Extension (1)		
➤ Agronomy – Natural and Social Sciences (1)		
➤ Rural Studies, focusing on environmental issues (1)	5	18.5
➤ Food Science and Post Harvest Technology (1)		
➤ Forestry and Conservation – Natural and Social Sciences (1)		

### **Further Study**

Since receiving the Ecohealth award, seven respondents (25.9%) have gone on to receive additional formal education. All seven degrees are at the doctoral level and four are still currently in progress. Details of their programs, including location and year completed (or expected year of completion) are given in Table 2.

**Table 2. PhD programs of awardees since receiving the award**

Discipline	Institution	Location	Year completed
Poverty Reduction	Makerere University	Uganda	2003
Social Anthropology	University of Oxford	United Kingdom	2005
Geography	Carleton University	Canada	2005
Sociology	University of Alberta	Canada	2006 (expected)
Geography	University of Victoria	Canada	2006 (expected)
Applied Biological Sciences (specializing in dryland agriculture)	University of Gent in Belgium in collaboration with the University of Dar es Salaam, Tanzania	Belgium	2009 (expected)
Geography	Carleton University	Canada	Started 2005

## Professional Activities

Respondents were asked to give information on their current employment status and to describe their key area of work or study. Over 94% of past awardees reported that they were presently employed. Most of these awardees (63%) are employed in universities and nearly all are engaged in work or study that is linked either directly or indirectly to their earlier Ecohealth training. Details are given in Table 3.

**Table 3. Current employment activity of awardees**

a.Title	b. Institution	c. Country	d. Key area of work or study
<b>2004 Awardees</b>			
Adjoint à la coordination	Comité de Solidarité, Trois-Rivières	Canada	« Je travaille principalement dans le domaine de la coopération internationale dans des secteurs d'intervention variés (communications sociales, prévention de la dengue et des zoonoses, développement participatif, coordination de stages à l'étranger, prévention du vih-sida, projet en santé environnementale, etc.). »
Consultant	IDRC	Canada	"My current area of work builds on my PDA training at the Ecohealth PI and involves a scoping study that aims at integrating knowledge on health and environment linkages into the NEPAD policy framework, as well as into African development programs."
Consultant	Health Economics and HIVAIDS Research Division (HEARD), University of KwaZulu-Natal, Durban	South Africa	"In this role, I'm helping design a research initiative based on my MA work."
Ph.d. Candidate	University of Guelph, Rural Studies Program	Canada	"Research in the field of complex adaptive socio-ecological systems"
Program Officer	Department of Agricultural Extension Services, University of Ibadan	Nigeria	"My doctoral research is using the ecosystem approach to human health to examine the impact of activities of oil industry on the people and development of the Niger Delta region, Nigeria."
Research Assistant	American University of Beirut	Lebanon	"Currently, the work I'm involved in as a research assistant is related to health of working women and specifically musculoskeletal disorders. I'm working as a research assistant concomitantly with my thesis

None	-	Nigeria	project.” “The study used ecohealth approach to examined malaria, gastro-enteritis and skin infections among user of poultry waste and shallow well water at four vegetable farms in Lagos.”
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#### 2002 Awardees

First Nations and Community Consultation Specialist	Golder Associates	Canada	“Linking child health and ecological change (especially pesticides) over time through collection of oral histories and parent/farmer memory.”
PhD Candidate	University of Québec at Montréal, Institute of Environmental Sciences	Canada Field work in Brasil	Environmental health sciences
Research Assistant	School of Dietetics and Human Nutrition, McGill University	Canada	“My area of interest lies in medicinal foods or functional foods in traditional settings and how these relate to community health.”

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#### 2001 Awardees

PhD Candidate	University of Victoria, Department of Geography	Canada	“Sustainable Livelihoods of Coastal Fishing Communities, particularly artisanal fishing communities in developing countries”
Population Health Researcher	Capital Health, Edmonton	Canada	“Examining the determinants of health and trying to eliminate any disparities in health outcomes. Injury prevention and chronic disease prevention are focal points, though environmental considerations are addressed (i.e. land use planning).”
Senior Lecturer	Makerere University, Faculty of Social Sciences	Uganda	Poverty Reduction Strategies
Assistant Research Fellow	Institute of Human Settlement Studies, University College of Lands and Architectural Studies	Tanzania	“Research (natural resources, local knowledge, dryland agriculture), consultancy and teaching undergraduate students.”

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#### 2000 Awardees

PhD	University of	Canada	“The sociology of social and economic development.”
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Candidate	Alberta		
1999 Awardees			
Regional Program Officer	Canadian Crossroads International, Ontario Regional Office	Canada	“Previously with UNHCR on community services for refugees. Currently facilitating partnerships between community-based organizations in Ontario and in Tog working on community economic development, women’s rights, and HIV/AIDS.”
1998 Awardees			
Natural Resource and Environment Management Advisor	Seila/UNDP	Cambodia	“Work: Research and monitoring and evaluation of natural resource management of the indigenous people in Cambodia  Study: Anthropology of gardening: case studies from Amazonia and Melanesia”

## Continued application of an Ecohealth Approach

Respondents were asked if they had applied an Ecohealth Approach to their work or study since their participation in the Awards Program. Of the seventeen past awardees surveyed, fifteen (88%) answered 'Yes' and two (12%) answered 'No'.

The two respondents who had not applied an Ecohealth Approach since the Award Program gave the following explanations:

- "I haven't explicitly, though there are parallels between an ecohealth approach and population health approach, which we use in our day-to-day work. We attempt to ameliorate health disparities by relying on partner organizations (both communities and other professionals) within a given sub-population."
- "My Supervisory committee was more favourable in using of Sustainable Livelihoods framework since they felt an ecohealth approach would need a more focused attention on health aspects of the community and that it's more of an application than suitable for a PhD dissertation research."

### III. APPLYING THE ECOHEALTH APPROACH

*“Conceptually, an ecohealth approach is concerned with the multidimensional nature of human health—understanding how social, biological, economic, political and environmental factors interact to influence human health. This suggests interventions to improve health should move beyond a biomedical model to make changes in key systemic drivers of health. Methodologically, the approach advocates a transdisciplinary orientation, conducting research at the community level with input from various community members and stakeholder groups, and collected/ analyzed in a gender-sensitive and equity-oriented manner.”*

The experience of applying an Ecohealth Approach was explored.<sup>7</sup> Respondents were asked to discuss challenges faced, as well as factors that have helped or facilitated the application of an Ecohealth Approach. While individual experiences were unique, some common issues emerged. This section summarizes the *key challenges* and *facilitating factors* reported by current and past awardees.

#### Key challenges

##### ***Challenges to transdisciplinarity (7)***

- “It is more time consuming than working in silos. More expertise is needed and more money is needed compared to traditional linear based disciplines.” (5)
- “...the key challenge...is to reach the application of the pillars (especially transdisciplinarity and stakeholders participation) in an individual study. I think this approach is better to be applied by a multidisciplinary team.”
- “...the effective interdisciplinarity is a true challenge, mostly when conducting research in an international team, where cultural differences play a very important role.”

##### ***Conceptual challenges (and lack of institutional openness) (8)***

- “Establishing the complex interconnected relationships between human health and environment was one of the biggest challenges” (2)
- “...misunderstanding of the role of gender as an ecohealth component, lack of awareness regarding the theoretical foundations....”
- “It is very broad – difficult to go into depth about everything involved in the approach. I recall that at least one of my thesis readers thought the approach was a bit flaky (i.e. unrealistic).”
- “...advisors or committee members often have a more narrow approach and need to be won over....”
- “‘conceptualizing’ the Ecohealth approach ... I find that my supervisor often has opinions or interpretations of the approach which are inconsistent with my own, and it makes it somewhat difficult for us to find common ground on research needs and expectations.”
- “Being comprehensive without losing generalizability.”
- “Sharing the idea of ecohealth approach with the NGOs and other stakeholders in the field was challenging while I was an awardee and was struggling to understand the approach fully.”

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<sup>7</sup> For a list of definitions of an *Ecohealth Approach*, as given by respondents, see Appendix E

### **Methodological Challenges (7)**

- "...the integration of results from various fields into a research and not losing the focus of ones research work; and integration of qualitative results from public responses and the quantitative results from the labs."
- "...operationalizing ecohealth"
- "...defining a research program that meets the needs of multiple stakeholders"
- "...in an academic degree context (i.e. for a PhD student) it is difficult to design a research project that can integrate all the EcoHealth principles." (2)
- "Find a methodology that mixes social, environmental and health issues"
- "As an agronomist try to think not only in my field but to look for other central issues."
- "...lack of accepted methods...."

*"By far the greatest difficulties are in applying the ecohealth approach in the field. Since the approach is interdisciplinary, the student will invariably excel in their respective field of discipline and lax in others. Also, consideration and measurement of ecohealth variables increases one's workload. For instance, in one community I found that the environment in which they lived had a profound influence on their diet and lifestyle. It would have been interesting and quite insightful if I could have performed a vegetation analysis or used GPS to assess biodiversity between the three communities to obtain empirical data. This would have entailed a dramatic increase in workload and new equipment that was not available to me. The skills needed were also lacking. The most I could do was obtain a vegetation map and note the vegetation types surrounding each village."*

### **Challenges to stakeholder participation (6)**

- "Difficulty in collaboration all stakeholders to participate and attend focused group Discussions meetings."
- "To contact people and talk about the idea, especially stakeholders"
- "...ensuring stakeholder participation is a work-intensive though rewarding process."
- "The main challenge I had was entering the study through a partnership with the Cuban health ministry. The Ministry was not particularly interested in helping me pursue the 'environmental' angle of the study, as they were worried that this would dilute the money/computers/benefits they received from me (i.e. they might be shared with environmental departments)."
- "As for the involvement of local stakeholders, in my experience in the Tapajós region the challenge is mostly due to the fact that authorities keep believing that the mercury issues come only from the gold-mining activities, and deforestation for agriculture and/or cattle is less than an issue. Even the Brazilian scientific community still has about the same speech as 10 years ago, which uses a quite biomedical approach and nourishes the mentality of local authorities."
- "Difficulty is getting some stakeholder's perspective on the issues of the research. For example it was difficult for me to obtain the perspective (personal interview) of the oil industry with regard to the issues of my research during data collection."

### **Challenges to community involvement (4)**

- "Poor response to clinical test due to uncertainty about the actual aim of the test and the assumption that it was for the purpose of knowing their HIV status...."
- "...including marginalized people in the research process."
- "...how to involve local communities in participating in my research."
- "Sustaining community tempo after the research...."

### **Linking research to policy (2)**

- "Involving policy makers in the research activities as a concept of participation is a little bit of a problem. [...] More efforts in integrating them into the research systems is needed, and also they



must be involved in the problem formulation of which they may give the research results a strong support for their applicability on the ground.”

- “Translating knowledge to influence policy”

The Ecohealth Approach has challenged awardees conceptually. Difficulties in understanding the core concepts were reported in awardees themselves as well as in supervisors and project stakeholders. This challenge is evident not only from direct comments, but also from several comments that revealed confusion around the concepts, particularly around ‘transdisciplinarity’. This term, which represents a core principle of the ecohealth framework, was used interchangeably throughout the surveys with ‘interdisciplinarity’ and ‘multidisciplinarity’, distinctly different approaches to generating knowledge.

Respondents reported challenges in designing a research project that is inclusive of stakeholder interests and that fits into an academic degree program. Participation was also seen as a challenge, specifically in establishing trust with community members, gaining access to private sector stakeholders, and in overcoming a lack of willingness of ministries (who are accustomed to operating unisectorally) to collaborate with each other. A couple of respondents also commented on the challenge of bridging their research to policy.

## **Facilitating factors**

### ***Ecohealth Program Support (11)***

- “The pre-departure orientations of the IDRC researchers and the invited researchers are ... determining elements.” (Translated from French) (9)
- “The money is essential....” (4)
- “The readings, EcoHealth website and printed materials helped me to visualize the EcoHealth approach in practice, the opportunities and challenges.” (3)
- “Having support from IDRC (listserv) was instrumental.”

### ***Community Support (8)***

- “...the support from the community is the most important factor that helped me in applying successfully the ecohealth approach” (4)
- “Going through community and association leaders; Training and employing enlighten farmers as interpreters and questionnaire administrators; Field trials and experiments encouraged familiarisation....”
- “In a traditional setting, it seemed to me that communities were well aware of environmental, social and economic influences on their health. [...] Endless discussions, community participation and volunteers were what really facilitated the application of the Ecohealth approach.”
- “...I should definitely mention the role of women in promoting and stimulating the participation of villagers in the research process.”
- “Local traditions, norms and beliefs were adhered to ensure that communities openly participated.”

### ***Institutional openness (4)***

- “My interdisciplinary thesis committee.”
- “...having a supervisor who was very open to working in an ecohealth fashion.” (3)

### ***Stakeholder participation (3)***

- “Key collaborators (the Kenya Government ministries) were willing to participate in the study.”
- “...the host institution that was interested in the project, which helped me with the access to the stakeholders related to the research.”
- “...stakeholders who are willing to work together.”

### ***Research team (4)***

- “A team that have a good understanding of the principles of the approach.”
- “...being part of an umbrella project which has already integrated the Ecohealth approach and set the framework for my research...” (2)
- “If my research had been done in a ‘solo’ framework, I believe that I would have had difficulties in mobilizing the various actors, but as my research registered itself as an international cooperation project, these various aspects were lessened allowing me to have from the start a climate of trust with the community.” (Translated from French)

### ***Support from governments and policy makers (3)***

- “Ethical permissions from government”
- “Policy makers who are willing to embrace the knowledge generated.”
- “The considerations for sustainable environment management as a government policy in Uganda.”

### ***Conceptual understanding (3)***

- “...a good comprehension of the concepts.”
- “The understanding that a more holistic approach to human health and social development is needed to guarantee human health and sustainable development.”
- “The first thing that helps is simply putting it out as a challenge: Challenging people to try thinking about things in a different way.”

The strongest facilitating factors in applying an Ecohealth Approach were: support from IDRC (training, funding, material resources and the listserv) and support from communities. Other aids were institutional openness to the approach and involvement with a larger research project. Stakeholder participation, support from governments and policy makers, and a solid comprehension of the core concepts also helped in applying the approach in the field.

## IV. THE AWARDEE EXPERIENCE

### How awardees first heard of the Awards Program

Word of mouth has been a strong form of advertising for the Awards Program. Nearly one third of respondents (29.6%) first heard of the Awards Program from other researchers.

The same number of respondents first heard of the Awards Program through their universities. University sources included professors, mailing lists and bulletins.

**Table 4. How awardees first heard of the Awards Program (n=27)**

	No. <sup>a</sup>	%
Other researchers	8	29.6
IDRC award recipient	2	7.4
IDRC program staff	3	11.1
IDRC publication	2	7.4
IDRC website	6	22.2
University	8	29.6
Other		
➤ Redesma Bulletin ( <a href="http://www.redesma.org">www.redesma.org</a> )	3	11.1
➤ Urban-Harvest Listserv		
➤ Listserv (unspecified)		

<sup>a</sup> The total of this column exceeds 27 because some respondents indicated more than one category

### Ecohealth Awards Training Week

All of the respondents surveyed (100%) had participated in an Ecohealth Awards Training Week hosted by IDRC in Ottawa.<sup>8</sup> When asked if they had found it useful, all respondents (100%) answered positively. Highlighting comments are organized by theme and the number of respondents that expressed similar ideas is identified where appropriate.

#### ***Refining of research proposal (13)***

- “The presentations I made and questions posed by observers and participants gave vertical focus that streamlined my initial proposal.” (3)
- “...it was a privilege to spend so much time developing my research methodology and methods.”
- “We were able to re propose our research during that week introducing in deep the approach and discussing our thoughts with professionals that already use the Ecohealth Approach.”

<sup>8</sup> One respondent did not attend the meetings in Ottawa, but received the training materials and other input remotely.

- “To have experts from diverse fields comb over your proposal and offer helpful suggestions was one of tremendous benefit. It allowed me to better understand my research question and consider aspects that I never would have thought of.”

### **Networking with awardees (13)**

- “...the unique opportunity it provided in exchange of ideas and interaction with researchers from different parts of the world was very helpful.” (3)
- “...there could have been more time developing relationships and exchanging knowledge between the participants.” (2)
- “I got useful contacts and created a network that will facilitate future collaborations.” (2)
- “...the contact with other awardees was useful for giving perspective....”
- “Met the awardees and learned about ecohealth research topics of other recipients. Exchanged ideas and shared knowledge on the methodology and applied aspect of the co-systems approach.”

### **Networking with IDRC staff, trainers and peer trainers (11)**

- “I met other researchers and IDRC staff who were successful in applying the Ecohealth approach. I benefited from their experience and the challenges they faced during their work.” (3)
- “I appreciated learning a little more about IDRC’s programs and projects and was particularly inspired by the testimonies of the two external trainers, notably Rachel Berr Kezner.”
- “I find really useful to be in contact with IDRC team leaders and have the opportunity to receive their orientations on my project.”
- “...benefited from learning about other perspectives and initiatives related to EcoHealth that were different from those emphasized by my advisors.”

### **Understanding of the Ecohealth framework (11)**

- “It gave a clearer view about ecohealth...”
- “I found it useful as that serves as the first exposure of the ecohealth principles to the awardee.”
- “...the trainers were excellent in communicating to us the essence of ecosystems approach and in explaining the ways of achieving it.”
- “I saw the value of the EcoHealth approach as illustrated by the breadth of the health issues that could benefit from such a focus.”
- “I felt that the training could be better facilitated. [...] The EcoHealth approach could be integrated in a more active, participatory way. The resource people and peer trainers were excellent, and really concretized the EcoHealth approach for me.”

*“For a young Latin America student it is not easy to create an environment which helps you to build your research idea, with a team and with resources (books, papers, money, experience). This project gives you a friendly working environment which rich you personally and gives you ideas to work in your own country.”*

### **Integration of Ecohealth principles into graduate research degree (3)**

- “Spending a week with such an interesting group of people was a treat, and very useful for the formation of my research.”
- “...it was more beneficial than the methodology course at the time of my academic program.” (Translated from French)

### **Other comments**

- “The training also gave me ideas about how to incorporate the EcoHealth approach into my teaching and community-based research.”
- “...found it very useful as an introduction to thinking about the complexities of ecosystems and health as understood by local communities....”
- “The materials provided during the training were very useful too.”

- “I got a wonderful first exposure of traveling out of my country.”
- “...I was given a chance to present my proposal the thing that imparted presentation skills on my research work.”

The Training Week hosted in Ottawa initiated young researchers to the Ecohealth Approach to human health research. Aside from introducing the core concepts of the approach and examples of its application, respondents reported that the training offered a valuable opportunity to refine their research proposal and to network with other awardees and ecohealth practitioners, including IDRC staff, trainers and peer trainers.

## Ecohealth Awards Program: Strengths and weaknesses

Respondents were asked to prioritize the following components of the award by their usefulness: ***exposure to an international organization, financial support, network/contacts, training, and other.*** Further, respondents were asked to discuss the most and least useful aspects of the award, as well as its administration. It emerged that the greatest strengths of the award were, in order of priority: *financial support, training, exposure to an international organization, contacts, the approach itself, and material resources.* Other useful aspects that were mentioned included: “presenting research in conferences”, “research knowledge of other areas and topical issues in other countries and globally”, “potential conference and publishing opportunities”, and “IDRC support (intellectual, methodological, peer)”. Areas of weakness that emerged were: network opportunities, field support, and follow-up. The administration of the award was generally considered to be very good, but there were some concerns related to the use of the Listserv and to communication regarding budgeting and the release of funds.

### ***Strengths of the Awards Program***

The frequency of comments made on a given aspect of the award generally reflected the former prioritization by awardees. The number of comments reported for each area is included in parentheses.

#### ***Financial Support (13)***

The “generous” financial assistance of the award was reported as the most useful aspect of the award. Respondents expressed that without the IDRC funding, the scope of their research “would have been reduced drastically” and in some cases, “would not have otherwise been possible.” A few respondents mentioned that the funding for conference participation was a valuable addition to the award.

*“I would not have been able to do my research without the financial support...”*

#### ***Training (13)***

The training week by IDRC in Ottawa was reported as the second most useful aspect of the award. Respondents indicated that the opportunity to “learn from research experience”, “to exchange ideas” and to listen to feedback from the IDRC staff, external

*“Most of the young researchers need capacity building. Meeting with the trainees and receiving the hands on experience from the trainers coming from different countries was a useful and strong aspect of the award.”*

trainers and past-awardees was an asset to their research. One respondent commented that “meeting up with and knowing the cultural settings on which other awardees are focusing their research was one of the most helpful aspects” of the award. Another noted that the training “gives knowledgeable perception on how to apply the concept in one’s area of specialization, without which financial support would give little or no result.”

### **Exposure to an International Organization (4)**

The third most useful aspect of the award was reported to be the exposure to an international organization. One respondent made the following comment: “contact with an international organisation like IDRC provided me with opportunities of knowledge of state-of-the-art research and topical issues around the globe, contacts with research publications and other organizations and a network with researchers around the world.” Another respondent stated that: “I also get to learn about any new opportunities faster.”

*“As most of the young scientists from the developing countries lack exposure to the international organization...the concept of bringing the awardees to the training at IDRC headquarters in Ottawa was a great and useful aspect of the award.”*

### **Network/Contacts (2)**

Contacts with other awardees, trainers and IDRC staff were reported as the fourth most useful aspect of the award. One respondent expressed: “I hope to continue a relationship with IDRC and the other awardees and trainers. The network will be very useful. Most importantly, I feel like the IDRC EcoHealth team is available as a resource to me – if I have problems/questions in the field and as my research evolves, and into the future as I develop new research directions.”

*“...the Award differs from others in that it awakens the strengths and benefits of interdisciplinarity. The idea of interdisciplinarity is an excellent concept but often difficult or impossible to apply in the field. The Award attempts to facilitate the application of interdisciplinarity via workshops and being at the disposal of the awardee.”*

### **The Approach (3)**

The Ecohealth Approach “as an alternative way to research” was acknowledged as one of the most useful aspects of the award. One respondent commended the experience for “instilling in recipients of the award the capacity to cherish Ecosystem health as a fundamental aspect of development management and sustainable livelihoods.”

### **Material Resources (3)**

Respondents commented on the quality and usefulness of the material resources made available by IDRC. One respondent stated: “The web references and ecohealth book etc. are constant sources of reference for me here in the field – concerning published reports on my research area and many of the concepts and issues involved in my specific research question(s).”

Comments on other useful aspects of the award included: “Support to attend a conference: I am looking forward to yet another experience when I will attend an international conference to disseminate my research findings”, “Having a practical experience in the field to apply the Ecohealth Approach and at the same time trying to understand how the systems approach works were the most useful aspects of the award”, and “I will be more confident developing cross-sectoral, multi-stakeholder, participatory research across borders in the future.”

## ***Areas of weakness***

Some concerns emerged from the discussion part of this question. The number of comments reported for each area is included in parentheses.

### ***Network Opportunities (6)***

Several comments were made regarding a need for a better-supported network of ecohealth practitioners. Comments included: “IDRC needs to link the awardees with related organization in the field of studies, as well as maintain a constant link with the awardee after the expiration of the award”, “I need sometimes to have support and follow by [trainers and IDRC staff]”, “there is need for constant interaction with the awardees. Information necessary should be provided not based on request from the awardee”, and “although many attempts were made to link up with experts, there was hardly any active support from it. It was a good attempt, though.”

There was recognition by some that a greater effort needs to be made by awardees themselves to engage this network. Comments that highlight this include: “The Listserv and other electronic networking resources should be used much more proactively and should be part of an ongoing program for building the ecohealth community. The conference was great, but it was a one-time thing. [...] There needs to be something that ties us together beyond the occasional conference” and “During the fieldwork networking between award holders was not possible. This could be due to the absence of listserv facilities at that stage. [Greater] frequency of contact between the award holders would have been useful.”

### ***Field Support (4)***

Some respondents felt there was a lack of support once they were in the field. One respondent stated: “Frequency of contact, quality of resources are surely what we have to improve. I suggest more contact and I believe the IDRC staff have our proposals and they can give us support in a working progress way. Resources can be articles, publications and so on.” In some cases, it was not possible to access the support that was available due to limited communication infrastructure. One respondent explains: “Unfortunately, I was in a position during my fieldwork where Internet access was very limited and expensive. Telephones were also unreliable and expensive. This meant that I had little contact with IDRC and could not benefit from their services.”

### **Follow-up (4)**

Respondents expressed that follow-up measures such as publication of research results, additional funding, and a follow-up meeting, could improve the award. Comments included: “The follow-up from the award and the workshop were somewhat disappointing as there has not been any real effort to reach out to awardees of the program”, and “There is ... need to ensure publication of the research findings.”

Specific suggestions included: “Awardees who wish to follow-up on their projects should be supported if the project merits it” and “After the research training award, the same cohort of the awardees could be brought together somewhere to discuss the aspects of the award. That is awardees could have explained to each other the strength, weakness, opportunities and threats related to the research s(he) carried out and share the experience. This aspect is lacking in the programme. I would urge that this is incorporated as one of the aspects of the award in the coming years.”

## **How could the Ecohealth Awards Program be improved?**

Respondents were asked if there were any additional elements that could improve the award. Table 5 lists the suggestions that were fielded from awardees.

**Table 5. Additional elements that could improve the award (fielded from awardees)**

<b>Suggestion</b>	<b>No. of respondents who made this suggestion</b>	<b>Comments surrounding the suggestion</b>
<b>Suggestions that relate to networking opportunities</b>		
Follow-up meeting or conference	6	6 respondents agreed that it would be beneficial to meet up following completion of fieldwork. <ul style="list-style-type: none"><li>➤ “Continue the training program which would help the researchers/awardees an opportunity to get to know each others research initiatives and cultural factors that determine the course of research.”</li><li>➤ “This will allow both parties, the Ecohealth PI and past awardees to share notes, learn and improve on the award program. This survey is one good step, but a mini-conference would have allowed many others to share in my experiences.”</li><li>➤ “To provide the chance to the awardees to meet after finishing their research in order to present their projects, the challenges they faced and how they have applied the Ecohealth Approach.”</li></ul>
Pre-conference	1	➤ “Before attending the conference to have a prior



interaction			interaction using chat sessions and work meetings as a requirement. In order to take advantage of the time that we have during our week with trainers and project managers.”
More contact with IDRC	2	➤	“More opportunities to keep in touch with IDRC. I appreciate receiving the newsletter. I have had aspirations to conduct further research or work with IDRC.”
		➤	“Follow up by trainers in IDRC with awardees to check on the progress of their work and the difficulties they are facing.”
Follow-up funding	1	➤	“Need to follow up the awardees with funding for more sustained appreciation of ecohealth systems approach to development management.”
<b>Suggestions that relate to field support</b>			
Ecohealth supervisors	1	➤	“...it will make a lot of difference if ecohealth supervisors are attached to each awardees. The interactions between them could improve the quality and standard of research output that will be submitted to your achieves. Questions and problems can also be discussed with familiar supervisors easily than non supervisors.”
Field visit from Ecohealth team member	1	➤	“Having one of the Ecohealth team in the field, to make additional suggestions while we are at our research environment.”
Field manual	1	➤	One respondent suggested that it would be useful in the field to have a “guide to ecohealth (outlining such things as ‘how to recognize ecohealth issues in context’ or where to begin with research, from a practical sense, vs. theory and definitions of ecohealth etc.).”
<b>Suggestions that relate to follow-up</b>			
Support for dissemination of results in the communities	3	➤	“I think that IDRC should create a fund that would allow EcoHealth researchers to travel back to the communities they researched in order to allow them to share the results of the study directly with the people who supported it. This is an important part of giving back to the communities that is largely ignored by most/all funders. [...] This could be part of the current \$4K that is for attendance at a single conference to share results, or it could be a separate fund.”
		➤	“A return field visit could also be included in the eligibility for [the conference] funding.”
Publication opportunities	2	➤	One respondent suggested that IDRC provide opportunities for researchers to publish their work
		➤	One respondent suggested that awardees contribute their final research papers to the EcoHealth journal
Feedback to reports	1	➤	“Sending reports back to awardees for corrections, edition, in addition to other suggestions will go a long way to

Access to final reports or publications	1	<ul style="list-style-type: none"> <li>➤ improve the quality of the research.”</li> <li>➤ “...access to the final reports or publications of other students would be interesting to read, as it would let us follow up on how their research plans, as elaborated upon in the workshop, were actually implemented.”</li> </ul>
Listserv	1	<p>To send out:</p> <ul style="list-style-type: none"> <li>➤ Project information</li> <li>➤ Upcoming conferences</li> <li>➤ Publishing opportunities</li> <li>➤ Research updates</li> </ul>
<b>Other</b>		
Regarding \$4K conference fund	3	<ul style="list-style-type: none"> <li>➤ “IDRC can ... assist awardees in finding or suggesting appropriate conference to attend and present research results from the fund available to attend a conference, especially to developing countries participants which may have little or no information of such conferences.”</li> <li>➤ “I ... think that the \$4K should also be available for people to attend as many conferences as they can for that amount of money....”</li> <li>➤ “It has been difficult to access the funds to go to a conference. I would like to access those funds over a longer timeframe, because the way it is set up is unrealistic given our academic commitments.”</li> </ul>
Final Report Format	2	<ul style="list-style-type: none"> <li>➤ One respondent suggested having a provision for film and video footage, or photo essay as an alternative approach to report presentation.</li> <li>➤ “The format for IDRC – ecohealth technical report writing is unknown to most awardees, adding such important outline to the numerous materials you share will help.”</li> </ul>
Local delivery training sheets (LDTs)	1	<ul style="list-style-type: none"> <li>➤ One respondent suggested that LDTs be developed for easy access to potential stakeholders in the field. LDTs is a small scale local empowerment training concept.</li> <li>➤ “Providing training to communities can be a difficult and expensive task to accomplish. For development where the cost of implementing training has a direct correlation with aid / assistance usually dictate that training is provided to a selected few who then initiate a project. Often the local facilitators are left with manuals and perhaps a short explanation in a second hand form to implement and manage the project at a local level. Would it not be of benefit to train the local facilitators at this local level, even better to provide quality training and knowledge to those who will actually work on, benefit from the projects by applying the methodology, such as the ecosystem approach?”</li> </ul>
Ecohealth library	1	<ul style="list-style-type: none"> <li>➤ One respondent suggested that a “knowledge based library and a training library on ecohealth system” could be developed.</li> </ul>

Improved interface with advisors	1	➤	“...I think that the program could improve the interface with advisors of students applying to the ecohealth award program, in order to stimulate these groups in adopting this approach in their research practices. This will certainly facilitate the application of the ecohealth conceptual framework in the conduction of the projects of future awardees.”
No comment	7	-	

## Administration of the Awards Program

Feedback regarding the administration of the award was generally very positive. However, some issues regarding budgeting and the Listserv emerged from the responses.

### Program Staff (8)

Comments on the interaction with program staff were all positive and included the following: “Communication is generally very clear and timely, staff is extremely helpful and flexible”, and “the program funding etc. was very well administered by Jean-Claude Dumais and he is very helpful and diligent in quickly replying to any and all concerns.”

*“Everyone at IDRC was absolutely helpful.”*

### Listserv (8)

Comments on the Listserv were mixed. While some felt it “was a great tool”, most comments pointed to its limitations or lack of use. Comments included: “The listserv has not been very helpful, although a few people have tried to share information on it. I haven’t been particularly engaged by the listserv as in general I don’t really like them”, and “The administration of the listserv was ok. Except that responses to issues were limited. I believe maximum linkages will be encouraged if vacancies related advertisement that are of interest to members are introduced.”

*“The Listserv seems to be non-functional as far as I know. I would be interested in trying it out, the idea seems good.”*

### Budgeting and Release of Funds (3)

A few comments suggest that communication could have been clearer with regards to budgeting and the release of funds. Comments include: “We were asked to do a timeline for our budget which afterwards proved unnecessary as the funds had to be dispersed in two payments”, and “The rules around the use of the conference funds could have been more clear – I was under the impression that I could use the funds, up to 4K, to attend multiple conferences but this was not the case.” One respondent found the

*“I would have liked more guidance concerning budgeting. There are many costs here in the field that I did not anticipate and I did not realize that our proposed budget would be taken as our final budget.”*

timed release of funds problematic: “The only thing that I do not find a reason for is the fact that one leaves Cdn\$1,000.00 withheld to deposit after the deposit of the report. I would have well used this amount during my period in the field ..., but I didn’t have it, therefore finally the amount of my award was Cdn \$1,000.00 less because of this administrative step” (translated from French).

Additional comments included: “It would be really useful to provide a better literature access than the actual IDRC on-line library” and “I would have appreciated a short outline of what is expected of us in terms of outputs: from here in the field and afterwards.”

## Status of involvement after receipt of the award

Nearly all of the respondents (92.6%) reported that they maintained contact with the people they met during their participation in the Awards Program. This supports comments that underscored the value of the network initiated by the Awards Program. The most contact has been maintained between awardees themselves. Details are shown in Table 6.

Table 6. Colleagues with whom Awardees have maintained contact		
	No.	%
Fellow awardees	18	66.7
Staff at IDRC	16	59.3
Trainers	11	40.7
Stakeholders	10	37.0

## V. IMPACT ON CAPACITY BUILDING

*“I understood that a multidisciplinary approach is crucial to solving the problems facing the developing countries and that although different organizations are working towards better living standards for the vulnerable groups, weak or lack of linkages greatly impede their achievements.*

*I have gained knowledge on how I can use the ecohealth approach, including transdisciplinarity in my thesis without compromising on the quality of the work as well as meeting the requirements of a university degree.*

*Participation in the awards has brought a new meaning to the word ecosystem, I now understand ecosystem as in encompassing health, economic, social and the physical environment and not only as the physical environment.”*

### Introduction and Summary of Findings

This section assesses the Awards Program’s contribution to building the capacities of researchers it has supported. The first part explores the contributions reported by respondents in three areas: skill development, knowledge and awareness, and networking. The second part addresses the impact of this capacity building on career advancement.

The awards have made a significant contribution both to increasing researchers’ conceptual understanding of the Ecohealth Approach and to strengthening their ability to apply it. This has influenced further research activities and career directions, and has led to professional and academic opportunities.

### Individual Capacity Building

Each of the 27 respondents (100%) indicated that they had gained new knowledge and/or skills from their participation in the Awards Program. Respondents were asked to describe any new knowledge and/or skills gained. This section summarizes their responses.

#### ***Skill Development***

Feedback indicated that respondents gained confidence in their ability to apply an Ecohealth Approach. Respondents reported that the training week in Ottawa and the opportunity to conduct fieldwork afforded them skills in the following areas:

- Ability to frame problems from an ecosystems perspective
- Methodological skills
- Administration skills

Eight respondents (29.6%) reported skill development in constructing a research problem from different disciplines, as required by a transdisciplinary approach. Seven respondents (25.9%) commented on the methodological skills they acquired, including thesis proposal design and refinement in the field, data collection techniques and how to include multiple stakeholders. Five of these comments highlighted the participatory aspect of the methods learned. One respondent indicated that the opportunity to manage a budget provided administrative skills.

### **Knowledge and Awareness**

Increased knowledge and awareness was reported in the following areas:

- Ecohealth approach
  - Transdisciplinarity
  - Participation
  - Social and gender equity
- Research methods
- IDRC projects
- IDRC resources

*“The skills obtained from the Training Award allowed me to develop a more holistic approach to answer my research question. Consequently, the proposal was modified to accommodate the extra research parameters. It was at this stage, when we were obliged to restructure our protocol into a schematic diagram that lists extraneous environmental, social and economic factors that a true comprehension of my hypothesis emerged. Armed with knowledge obtained from the Training Awards, I came back from the field with enough data to address any confounding or explanatory variables.”*

Seventeen respondents (63.0%) reported a gain in understanding of the conceptual framework of the Ecohealth approach. Reference was made by some to the core principles of the approach: transdisciplinarity, stakeholder participation, and social and gender equity. Six respondents (22.2%) highlighted the value of ‘transdisciplinarity’, five respondents (18.5%) highlighted ‘participation’, and three respondents (11.1%) highlighted ‘social and gender equity’.

Seven respondents (25.9%) reported a gain in knowledge of field research methods. Three respondents (11.1%) mentioned awareness gained through exposure to Ecohealth projects. One comment noted that the award experience offered a “feel for research going on in other areas” and “some concrete and inspiring examples of fieldwork funded by IDRC.” One respondent reported an increased “understanding of what IDRC does” and the resources available, including the EcoHealth journal and the IDRC database.

Other comments noted that the award offered a “better perspective of human behaviour/human health relationship”, “knowledge ... in solving community and health problems”, and that it “gives you ideas to work in your own country.”

## Networking

Four respondents (14.8%) commented on the opportunity to establish a network of colleagues and professional contacts. One of these respondents notes, “Through this program I have been able to attend a week conference in Canada.... It let me to interact among peers who are studying and working in different countries but that are facing similar problems related with agricultural, environmental and health issues which involve human’s activity.”

## Career Development

*“During field visits, I have been able to identify the unmet needs of the community that indirectly influence health outcomes e.g., land ownership tenure that slows down adoption of fruit trees by young couples who are still living in the father’s land. This will be considered in my future career endeavours.*

*Ecohealth award has instilled in me the need for networking with other researchers, policy makers and community members, since the award, I have created networks with these groups that will facilitate career development.*

*So far, I have submitted a proposal, in which I applied the principles of ecohealth approach to human health to African Institute for Capacity Development (AICAD). If funded, this will greatly enhance my career.*

*I am in the process of responding to the call for Letter of Intent by Global Health Research Initiative (GHRI) focussing on ecohealth approach to human health. If funded, part of the data will form my PhD thesis.”*

Respondents were asked to describe how the experience and knowledge gained during the award period has been of use in the development of their careers. Twenty respondents (74%) offered comments, which are organized by the following themes: **Professional Development, Influence on Research Activities, Networks, Professional and Academic Opportunities, and Influencing Career Direction.** Where relevant, synthesized comments are added, but most comments are included in quotes to illustrate the richness of individual experiences. Seven respondents (26%) either made no comment or indicated that they felt it was too early to comment.

## ***Professional development***

Respondents developed their skills, ability and confidence to conduct ecohealth research. An enhanced appreciation for the value of transdisciplinarity, participation and gender equity has been carried into awardees' professional activities. Comments included:

- "Better knowledge of survey methodology. I acknowledge the differing opinions better on any one issue and the importance of trying to reconcile those differences for the common good. Improved presentation skills."
- "I anticipate being able to contribute to the further planning and programming of educational / research / training curriculum for such participatory initiatives as Farmer Field Schools or other extension education methodologies."
- "The knowledge obtained at the time of the training and during the whole period of my research allows me today to put this approach into practice ... As I work with partners abroad, cooperation in the field and the research projects themselves are enriched and consequently, I develop new skills, which leads to more effective results than before. I have also incorporated actors and decision-makers in the implementation of our project abroad."
- "I am working in the private sector providing consulting services in community based research design and implementation for Canadian and international clients and communities. My skills and ability to approach community concerns from ecosystem and health perspectives has proven very useful with applications in my work with First Nations and Métis interests here in Canada, as well as in other areas."
- "My career has followed progressively on this work. I have used the research and writing skills I learned during the award in all of my work since."
- "This experience was a sort of rite of passage in order to pursue my career goal as an ethnonutritionist in developing countries.... The fact that I succeeded in returning with all the data that I had intended on collecting, despite poor collaborative assistance, represents one of my proudest accomplishments. It is such hardships that enable one to feel empowered and able to confront any future challenges."
- "This experience is allowing me to enhance my understanding of the importance of including the various perspectives of stakeholders at multiple levels (community/ provincial/ national etc.).... I am gaining first hand exposure to the challenges of incorporating gender equity in development planning and implementation which I think will be valuable to other initiatives."

## ***Influence on Research Activities***

The opportunity to learn – and experiment with – an Ecohealth Approach has changed the way that researchers continue to approach and conduct research. Comments included:

- "The knowledge gained has assisted me to carve a new and novel research area among my contemporaries within my locality – Nigeria. It has helped me cut across Geography (my main background and social science) into natural and clinical sciences."
- "...the ecohealth approach is enabling me to examine health problems confronting people from a holistic point of view rather than from the traditional approach of cause and effect. It has also enabled me to analyse the differential impact of development practice on gender."



- “I ... have gained knowledge regarding the pillars of ecohealth approaches ... and applied it in my research which has been a useful tool in my day to day research activities, of which I am trying hard to impart the knowledge to the students whom I am teaching in my institution as well as encouraging my fellow researchers to apply the approach in their research methodology.”
- “My career as a researcher in the field of medical geography and resources management using remote sensing/GIS has received an upliftment in the areas of conducting research from holistic points of view with [a] transdisciplinary approach. Sharing knowledge with researchers from various fields, aimed at sustainable development of our common resources has led to improvement in my handling of contributions from diverse fields, and the incorporation of such research results in my field of study.”
- 4 respondents expressed that they continue to take a systems approach to their research

## ***Networks***

The opportunity to meet in Ottawa allowed awardees to exchange knowledge and ideas and to build a network of colleagues and professional contacts. Comments included:

- “I feel like I have ... an expanded network of colleagues....”
- “It is giving me the chance to contact people and hopefully to build work projects for the future.”
- “Ecohealth Award has instilled in me the need for networking with other researchers, policy makers and community members, since the award, I have created networks with these groups that will facilitate career development.”

## ***Professional and Academic Opportunities***

The award has led to opportunities to present and publish research findings and has increased respondents’ employment potential, in some cases leading directly to employment. Comments included:

- “I’ve been able to present and introduce the proposal in Social and Ecological Scientific meetings and conferences.”
- “I feel like I have new publishing opportunities....”
- “I foresee this experience being valuable toward gaining entry into a development position in the area of participatory education / agricultural extension education programming in a Latin American country.”
- “I have been able to get my MSc with no research funding problems”
- “I ... think that my general skills concerning practical field research, and report writing – especially in a Spanish-speaking context – will increase my employment potential.”
- “I have ... stayed in touch with IDRC, returning as a peer trainer”
- “I had the opportunity to work with the Ecohealth Program Initiative of IDRC as both a Professional Development Award recipient and as a Consultant”

- “I was employed by the World Food Programme immediately following my research in Ethiopia as a result of contacts I met there and their interest in my research.”

### ***Influencing Career Direction***

Respondents have continued to apply an Ecohealth Approach in their work and study. This approach to conducting research is also being factored into respondents' future career plans and goals. Comments included:

- “I look forward to integrating the Ecohealth approach into my future teaching and research”
- “The award assisted me to position my career (Urban Poverty Reduction in the African Region).”
- “During field visits, I have been able to identify the unmet needs of the community that indirectly influence health outcomes.... This will be considered in my future career endeavours”
- “I have submitted a proposal, in which I applied the principles of ecohealth approach to human health to African Institute for Capacity Development (AICAD). If funded, this will greatly enhance my career.”
- “I am ... interested in a post of responsibilities in the international domain in a research centre or within the government allowing me to put to profit my knowledge and to again have professional challenges.” (Translated from French)

*“I agree strongly that the Ecohealth Approach should be applied in any community health project, since support in one aspect of a health-related exercise will often neglect others and results in negligible effects. In one urban community of Papua New Guinea, anti-HIV drugs were delivered by an NGO who neglected to assess the nutritional status of the population. Weight gain in HIV patients would never occur because of chronic undernutrition, which in turn affects gastrointestinal integrity and immune system function. In order to obtain truly beneficial results, an interdisciplinary approach must be used.”*

- “The ecohealth approach has allowed me to build on my interest in the environmental sciences, and has provided a powerful new area of interest – that of public health and epidemiology. I believe that the combination of these two interests has the potential to create opportunities for new research that could help contribute to the realization of improvements in both areas”

## VI. OUTPUTS AND INFLUENCE

*“My research was timely in the sense that the State was undergoing an intense people’s planning campaign for decentralization. And being invited as one of the subject committee experts in the State Planning Board, the results and lessons learned with the ecosystems approach, could be translated into the Municipal Plans.”*

One of the objectives of this study was to assess scientific and policy contributions arising from the Awards Program. This section provides detailed information on various program-related outputs and describes research influence as expressed by respondents. Table 7 indicates the number of recipients in each award year and the number of survey respondents representing each year.

**Table 7. Award recipients and survey respondents by award year**

<b>Award Year</b>	<b>Award recipients</b>	<b>Survey respondents</b>
2005	10	10
2004	8	6
-	-	-
2002	6	3
2001	5	4
2000	7	2
1999	6	1
1998	5	1
1997	1	0

### Outputs

Outputs were reported in the following categories: **Thesis**, Peer-reviewed **publication**, **Scientific or public presentation** of research results, **Policy brief**, **Presentation of a policy recommendation** to a policy or decision-makers audience, **Feedback of results to key actors or stakeholders**, and **Other**.

### ***Respondents who have completed a thesis based on their IDRC-funded Ecohealth research: 8***

Eight respondents reported that they had completed a thesis based on their Ecohealth award research, while thirteen indicated that they were in the process of completing one. Table 8 shows who has produced a thesis, on what topic, and relevant details, including on-line or library access information where available. In brackets, the number of respondents who have completed a thesis is given in relation to the total number of respondents by award year.

**Table 8. Respondents who have completed a thesis based on their Ecohealth research by year (theses/respondents)**

Author	Thesis Title	Details
<b>2005 Award Year (0/10)</b>		
<b>2004 Award Year (2/6)</b>		
Anosike, Vide	Water and Waste Management in Urban Farming: Implication on Public Health and Environment for Sustainable Development in Selected Areas of Lagos Metropolis (Nigeria)	Presented at departmental and post-graduate defence seminars
Chazan, May	Negotiating Human Health in a Rapidly Changing Environment: HIV and AIDS Vulnerabilities among Street Traders in Warwick Junction, Durban, South Africa	MA thesis, Carleton, 2005. A copy is available from the IDRC library. Available in digital format only.
<b>2002 Award Year (0/3)</b>		
<b>2001 Award Year (3/4)</b>		
Divakaran Nair, Nandakumar	Livelihood Assets and Survival Strategies in Coastal Communities in Kerala, India	A copy is available from the IDRC library (CD-ROM)
Marko, Joshua	Developing a framework for analyzing the impacts of urban transportation	Graduated in August 2002; A copy is available from the IDRC library.
Shemdoe, Riziki	Ecosystem management practices and human plague problems in West Usambaras, Tanzania: A socio-economic analysis	A copy is available from the IDRC library
<b>2000 Award Year (1/2)</b>		
Dakubo, Crescentia	Applying an Ecosystem Approach to Community Health Research in Rural Northern Ghana	Available on-line at: <a href="http://www.springerlink.com/media/agxy6yxvvg2xvmv5pn5u/contributions/9/v/d/d/9vdddnhha7k9dtfx.pdf">http://www.springerlink.com/media/agxy6yxvvg2xvmv5pn5u/contributions/9/v/d/d/9vdddnhha7k9dtfx.pdf</a>

<b>1999 Award Year (1/1)</b>		
Erlichman, Sarah	Ecohealth and Displacement: A Case Study of Resettlement and Return in Ethiopia	Available on-line at: <a href="http://www.yorku.ca/fes/research_pub/pubs/occasional_papers.asp">http://www.yorku.ca/fes/research_pub/pubs/occasional_papers.asp</a>
<b>1998 Award Year (1/1)</b>		
Hasna, Kaneez	An anthropological investigation of gardens and people	Completed in 2004
➤ 13 respondents indicated that they are in the process of completing a thesis		

### ***Respondents who have produced a peer-reviewed publication: 8***

Eight respondents reported that they had produced a peer-reviewed publication. Table 9 shows who has produced a peer-reviewed publication, the title of the article, and further relevant details, including on-line access where available. In brackets, the number of respondents who have produced a publication is given in relation to the total number of respondents by award year.

**Table 9. Respondents who have produced a peer-reviewed publication**

<b>Awardee</b>	<b>Article</b>	<b>Details</b>
<b>2005 Award Year (0/10)</b>		
<b>2004 Award Year (1/6)</b>		
Chazan, May	Chazan & Whiteside (2006). Understanding Vulnerability to HIV and AIDS: The Case of Warwick Junction. Social Science and Medicine.	Submitted Sept 2005, in review process
<b>2002 Award Year (2/3)</b>		
Owen, Patrick	Patrick Owen and Henry Urai (2004) in: Traditional Medicine in Papua New Guinea: Proceedings of the National Workshop on Policy and Practices, Editor: Prem P Rai; pp	

19-27; Printed by University of Papua New Guinea Printery, NCD, Port Moresby, Papua New Guinea. ISBN 9980-84-936-3.

Passos, Carlos

Epidemiologic confirmation that fruit consumption influences mercury exposure in riparian communities, Brazilian Amazon.

Manuscript to be submitted [in January 2006] for publication in *Environmental Health Perspectives*

#### 2001 Award Year (3/4)

Divakaran Nair,  
Nandakumar

Improving the State of the Coastal Areas: Proceedings of the Coastal Zone Asia Pacific Conference, 12-16 May, 2002, Bangkok, Thailand

Marko, Joshua

Marko J., Soskolne C.L., Church J., Francescutti L.H., and Anielski M. (2004). Development and application of a framework for analyzing the impacts of urban transportation. *EcoHealth* 1(4): 362-373. 2004.

Available on-line at:  
<http://www.springerlink.com/media/9c59kc0adk0uyje8bxaw/contributions/w/8/y/3/w8y3x684ej3baggq.pdf>

Nuwagaba, Augustus

"Urban Poverty and Environmental Health: The case of Kampala City". In Human Impact on Environment and Sustainable Development in Africa (Ed) M. Darkoh and A. Rwomire, Ashgate Publishing Company, London, 2002.

#### 2000 Award Year (1/2)

Dakubo, Crescentia

Dakubo, C. (2004). Ecosystem Approach to Community Health Planning in Ghana. *EcoHealth* 1(1): 50-59.

Available on-line at:  
<http://www.springerlink.com/media/agxy6yxvvg2xvmv5pn5u/contributions/9/v/d/d/9vdddnhha7k9dtfx.pdf>

#### 1999 Award Year (1/1)

Erlichman, Sarah

Erlichman, S. (2001). Ecohealth and Displacement: A Case Study of Resettlement and Return in Ethiopia, FES Outstanding Graduate Student Papers Series, Vol. 7, No. 1, ISSN # 1702-3521 (print) ISSN # 1702-3548

Available on-line at:  
[http://www.yorku.ca/fes/research\\_pub/pubs/pdf/sarah\\_erlichman.pdf](http://www.yorku.ca/fes/research_pub/pubs/pdf/sarah_erlichman.pdf)

#### 1998 Award Year (0/1)

**Respondents who have made a scientific or public presentation of their research results: 13**

Thirteen respondents reported that they had made a scientific or public presentation of their research results. Twenty-three presentations have been made in total. Table 10 shows who has presented, on what topic, where, and when. In brackets, the number of respondents who have presented is given in relation to the total number of respondents by award year.

**Table 10. Respondents who have made a scientific or public presentation of their research results**

Awardee	Presentation Title	Details
<b>2005 Award Year (2/10)</b>		
Ndiaye, El hadji Malick	Suivi des impacts environnementaux et de leurs incidences sociales des barrages de Diama et de Manatali dans le bassin fluvial du Sénégal : cas du district sanitaire de Richard Toll	Summer school and Le Secrétariat Internationale Francophone pour l'Évaluation Environnementale (SIFEE) annual meeting, June 2006, Bamako, Mali ( <a href="http://www.sifee.org">www.sifee.org</a> )  International Association of Impact Assessment (IAIA) annual meeting, 2007 ( <a href="http://www.iaia.org">www.iaia.org</a> )
Rivera, Claudia	Agricultural Practices and Food Safety: Case Study Strategies in the Argentinean Andes, Work Methodology.	Paper. Social Science Researchers Meeting from the Mid-Western Region (Cordoba, San Luis, La Rioja, Mendoza and San Juan). Socio-economic Research Institute, School of Social Sciences, National University of San Juan. May 2005.
	Food Safety and Agricultural Practices. A Study Case within the framework of Ecohealth Approach. A study located in the Central Andean Region of Argentina.	Poster Presentation. Ecology in An Era Of Globalization Conference. Ecological Society of America. January, 2006, Mérida, México
<b>2004 Award Year (2/6)</b>		
Anosike, Vide	Challenges of Sustainable Poultry Waste Utilization in Urban Food Security: An Ecohealth Perspective. Paper.	Wessex Institute of Technology (WIT) Sustainable City Conference 2006, 17-19 July, Tallinn, Estonia (See abstract in Annex [ ])

Chazan, May	Negotiating Human Health in a Rapidly Changing Environment: HIV and AIDS Vulnerabilities among Street Traders in Warwick Junction, Durban, South Africa	2 <sup>nd</sup> South Africa AIDSS Conference, June 2005, Durban, South Africa  Canadian Association of Geographers, Nov 2005, Ottawa, Ontario  International Union for Scientific Study of Populations, December 2005, Cape Town, South Africa
<b>2002 Award Year (3/3)</b>		
Candler, Craig	Transcendent Life (and) Science: Medicine, Ecology, and Flexible Biotechnical Citizenship in a Northern Thai Village	Joint meeting of the Society for North American Anthropology, Canadian Anthropology Society and Yucatan Anthropology Society, May 5, 2005, Merida, Mexico
Owen, Patrick	Ethno-medical Practices in Central Province, Papua New Guinea	Policy on Traditional Medicine Practices in Papua New Guinea, 28-29 July, 2004.
Passos, Carlos	Further Evidence of the Effects of Fruit Consumption in Lowering Mercury Exposure	XIII International Conference on Heavy Metals in the Environment, 5-9 June, 2005, Rio de Janeiro, Brazil. (Abstract attached)
<b>2001 Award Year (3/4)</b>		
Divakaran Nair, Nandakumar	Communities of the Tail-End Ecosystem: A Study on the Policies, Resources and Quality of Life Among the Coastal Communities in Kerala, India	Poster presentation at the Coastal Zone Asia Pacific Conference, April 2002, Bangkok, Thailand (poster sent to IDRC)
Marko, Joshua	Marko J, Soskolne C.L., Church J., Francescutti L.H., and Anielski M. (2003). <i>Sustainability, Health and Urban Transportation</i>	Canadian Society for Ecological Economics (CANSEE) Conference, October, 2003
	Marko J, Soskolne C.L., Church J., Francescutti L.H., and Anielski M. (2003). <i>The Impacts of Urban Transportation Expansion</i> .	Ecosystem Approach to Human Health Forum. International Development Research Centre, May 2003, Ottawa, Canada.



	Developing a framework for analyzing the impacts of urban transportation	Public presentation of thesis findings to West Edmonton Transportation Coalition, October 2002, Edmonton, Canada.
Shemdoe, Riziki	Ecosystem management practices and human plague problems in West Usambaras, Tanzania: A socio-economic analysis.	International forum on ecosystem approaches to human health, 18-23 May 2003, Montréal, Canada  Healthy Ecosystems, Healthy People, 6-11 June, 2002, Washington, D.C., USA.
<b>2000 Award Year (2/2)</b>		
Agyare, George	Traditional Systems of Conservation and Ecological Resource Use: Exploring the Links Between Local Knowledge, Ecosystems and Health Awareness in Ghana	Pacific Sociological Association annual conference: Expanding Sociological Horizons, March 23-26, 2000, San Diego, USA.
Dakubo, Crescentia	Applying an Ecosystem Approach to Community Health Research in Rural Northern Ghana.	International forum on ecosystem approaches to human health, 18-23 May 2003, Montréal, Canada.
<b>1999 Award Year (0/1)</b>		
<b>1998 Award Year (1/1)</b>		
Hasna, Kaneez	Urban Ecosystem Health and Housing in Slums of Fatullah, Bangladesh	Presented a photo essay at ARBAN, NGO, Dhaka, Bangladesh, January 2005.
	Indigenous Knowledge of the <i>Maali</i> in Garden systems in Delhi, India	Paper presented at the India Habitat Centre, New Delhi, India, March 2004.
	Urban Ecosystem approaches to Health and Gender in post-flood situation in Slums of Dhaka, Bangladesh	Paper presentations at the UNICEF and NGO Forum, Dhaka, Bangladesh, 1999.
	Ecosystem Health in the Slums: A case study of Fatullah Slums, Dhaka, Bangladesh.	International Health Conference, Ottawa, Canada

***Respondents who have produced a policy brief: 1***

Only one respondent, from the 2004 award year, reported to have produced a policy brief:

Awardee	Policy Brief
2005 Award Year (0/10)	
2004 Award Year (1/6)	
Chazan, May	HIV and AIDS Vulnerabilities among Street Traders in Warwick Junction: Opportunities for Local Government
2002 Award Year (0/3)	
2001 Award Year (0/4)	
2000 Award Year (0/2)	
1999 Award Year (0/1)	
1998 Award Year (0/1)	

***Respondents who have presented a policy recommendation: 6***

Six respondents reported that they had presented a policy recommendation to a policy or decision-makers audience. Table 11 shows who has presented, on what topic, and to whom. In brackets, the number of respondents who presented a policy recommendation is given in relation to the total number of respondents by award year.

**Table 11. Respondents who have presented a policy recommendation**

<b>Awardee</b>	<b>Presentation Title</b>	<b>Details</b>
<b>2005 Award Year (0/10)</b>		
<b>2004 Award Year (2/6)</b>		
Chazan, May	Negotiating Human Health in a Rapidly Changing Environment: HIV and AIDS Vulnerabilities among Street Traders in Warwick Junction, Durban, South Africa	Feedback to Local Government, Municipality, Health Care Providers, June 2005
Morrison, Karen	Adaptive Responses to the Ciguatera Fish Poisoning in Cuba: A Model for the Caribbean Region (Cuba)	Presented at the Oceans 2005 conference, 19-23 September, Washington D.C., USA  Research discussed at a Training on Food Security workshop, Series on Sea and Human Security, UNITAR, 26-30 September 2005, Hiroshima, Japan
<b>2002 Award Year (1/3)</b>		
Owen, Patrick	Incorporating Traditional Medicine in National Health Policies: Examples in Pacific Countries.	"I was chair of the Workshop on the Policy of Traditional Medicine Practices in PNG and organized discussion groups that included policy-makers from the Department of Health. I co-presented a talk entitled <i>Incorporating Traditional Medicine in National Health Policies: Examples in Pacific Countries.</i> "
<b>2001 Award Year (2/4)</b>		
Divakaran Nair, Nandakumar	Communities of the Tail-End Ecosystem: A Study on the Policies, Resources and Quality of Life Among the Coastal Communities in Kerala, India	Presented at a subject experts meeting at the State Planning Board, Kerala, during the first people's Planning Campaign for decentralization.

Marko, Joshua	Developing a framework for analyzing the impacts of urban transportation	Public presentation of thesis findings to West Edmonton Transportation Coalition, October 2002. Members of Alberta Environment were present.
<b>2000 Award Year (0/2)</b>		
<b>1999 Award Year (1/1)</b>		
Erlichman, Sarah	Environment and Gender in Development: A Case Study of Resettlement in Ethiopia in the 1980s, Ethiopia	"Discussed the research in the field with agencies working to support the community where we conducted research: Addis Ababa University, Save the Children UK, World Food Programme, other local NGOs."
<b>1998 Award Year (0/1)</b>		

***Respondents who have provided feedback of results to key actors or stakeholders (including communities): 10***

Ten respondents reported that they had provided feedback of their research results to key actors of stakeholders. Table 12 provides details on how feedback was presented and by whom. In brackets, the number of respondents who fed back results is given in relation to the total number of respondents by award year.

**Table 12. Respondents who have provided feedback of results to key actors or stakeholders**

Awardee	Location of research	Details
<b>2005 Award Year (3/10)</b>		
Lemire, Mélanie	Brasil	Produced a comic strip to publicize the research results of the CARUSO Project with the communities. Available on-line at: <a href="http://www.unites.uqam.ca/gmf/caruso/caruso_articles_01.htm#other">http://www.unites.uqam.ca/gmf/caruso/caruso_articles_01.htm#other</a>
Ndiaye, El hadji Malick	Sénégal	"Feedback [to] institutional actors [such] as OMVS organisation which built

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		dams, farmers association and communities council.”
Tracy, Tara	Equador	“This is already taking place on a monthly basis in the community where I am researching”
<b>2004 Award Year (3/6)</b>		
Anosike, Vide	Lagos, Nigeria	“Discussed results with farmers and Lagos State Agricultural Development Authority extension officers.”
Chazan, May	Durban, South Africa	Feedback to Street Traders, Other Participants, June 2005
Morrison, Karen	Cuba	“I ... will be returning to Cuba (with my own money) to present my work to the communities who participated in the project....”
<b>2002 Award Year (3/3)</b>		
Candler, Craig	Thailand	“Preliminary results were communicated back for review through follow up field visits to the two primary communities where my research was located.”
Passos, Carlos	Brasil	Produced a comic strip to publicize the research results of the CARUSO Project with the communities. Available on-line at: <a href="http://www.unites.uqam.ca/gmf/caruso/caruso_articles_01.htm#other">http://www.unites.uqam.ca/gmf/caruso/caruso_articles_01.htm#other</a>
Owen, Patrick	Papua New Guinea	“A report that presented a brief overview of preliminary results was handed to the Head of the communities in which I worked. A community presentation was also held.”
<b>2001 Award Year (1/4)</b>		
Divakaran Nair, Nandakumar	Ponnani Municipality, Kerala, India	“Feedback seminar was conducted at Ponnani Municipality, Kerala.”
<b>2000 Award Year (0/2)</b>		
<b>1999 Award Year (1/1)</b>		
Erllichman, Sarah	Ethiopia	“Returned to the community after the research to distribute photos and discuss the results. Discussed the research with other researchers at Addis Ababa

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1998 Award Year (0/1)

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### ***Respondents who have produced other outputs: 6***

Six respondents reported that they have produced other kinds of outputs. Table 13 provides details on what other outputs have resulted from the awards program, and who has produced them.

**Table 13. Respondents who have produced other outputs**

<b>Awardee</b>	<b>Output details</b>
<b>2004 Award Year</b>	
Morrison, Karen	“I will ... be writing a report for the Pan-American Health Organization (who also provided funds for my study)....”
<b>2002 Award Year</b>	
Candler, Craig	“I have been approached by a Thai film maker to communicate my results through participation in a documentary following my dissertation.”
Owen, Patrick	Newspaper interview (Papua New Guinea <i>Post Courier</i> )
<b>2001 Award Year</b>	
Shemdoe, Riziki	Shemdoe, R.S (2004). Local knowledge on Ecosystem Management Practices and Human Plague Problems in West Usambaras, Tanzania. International Institute for Applied Systems Analysis. Interim Report IR-04-007. Laxenburg, Austria. Available on-line at: <a href="http://www.iiasa.ac.at/Publications/Documents/IR-04-007.pdf">http://www.iiasa.ac.at/Publications/Documents/IR-04-007.pdf</a>
<b>2000 Award Year</b>	

Dakubo, Crescentia

Assessment of health and environment linkages in NEPAD and how they integrate the MDGs and WEHAB recommendations: Ecosystem approaches to human health professional development award; final technical report [May 2004 – April 2005]

Available on-line at: <http://idrinfo.idrc.ca/archive/corpdocs/121267/Dakubo-C-FR.pdf>

### 1998 Award Year

Hasna, Kaneez

Photo essay on Urban Ecosystem Health in the Slums of Dhaka, Queen Elizabeth House. Department of Development Studies, University of Oxford, UK, 2002.

Ecosystem Health: A systems approach. Radio Talk presented at National Radio Broadcasting of Dhaka, Bangladesh 1999

Three presentations relating to nutrition and medicinal plants in various departments at the University of Papua New Guinea

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## Influence

Respondents were asked if their research had had any demonstrable influence, scientific or otherwise. Most respondents (70.4%) reported that it was too early to demonstrate any influence, and two respondents (7.4%) answered negatively. Six respondents (22.2%) answered positively, reporting forms of influence including behaviour change of participants, input to municipal planning, institutional investment and programming, as well as influence on fellow researchers. Summary explanations are provided in Table 14.

**Table 14. Survey results: Has your research had any demonstrable influence, scientific or otherwise?**

Number of respondents who answered YES	Number of respondents who answered NO	Number of respondents who answered N/A or left blank
6	2	19
Comments	Comments	Comments
➤ "In regards to non-scientific influence, I have helped organize a few health programs and nutrition workshops in the communities in which		➤ Several respondents expressed that it was too early to demonstrate any

<p>I worked, especially among the women's fellowship. One overweight woman lost twenty pounds over three months following the recommendation that she walk an hour a day. This led to a domino effect in which other overweight women wanted to obtain similar results. When I returned to the community towards the end of my fieldwork, they were eager to have me reassess their anthropometric measurements. Indeed, I was happy to report to them that they had lost a significant amount of body fat which encouraged them to continue the exercise regime. One diabetic woman maintained that she was able to control her glucose levels in this way for the first time since she had been diagnosed."</p> <ul style="list-style-type: none"> <li>➤ "Yes, my research has greatly contributed to my influence in poverty reduction in the region. I am now a Poverty Reduction Consultant in the African Region."</li> <li>➤ "It has raised interest in Durban and among Street Traders. HEARD (the research institute that hosted me) has decided to extend my research into a longer-term project. It is difficult and too early to say what other influence this has had."</li> <li>➤ "My research was timely in the sense that the State was undergoing an intense people's planning campaign for decentralization. And being invited as one of the subject committee experts in the State Planning Board, the results and lessons learned with the ecosystems approach, could be translated into the Municipal Plans."</li> <li>➤ "I would like to believe it has, though I don't think it has permeated the levels of municipal decision making which is where the framework I developed is most geared at. I do know that a couple of students in attendance at the IDRC forum in 2003 used my conceptual model for their thinking."</li> <li>➤ "My research has made a number of significant contributions to the Ecohealth approach theoretically and methodologically. Theoretically, it has introduced a critical dimension to the approach by engaging in poststructuralist critiques and methodologically demonstrated how transdisciplinary research might be implemented in a rural setting that often lack such well-defined disciplines."</li> </ul>		<p>influence</p> <ul style="list-style-type: none"> <li>➤ "The objective of my research project is to decrease the exposure of the riverside communities of the Tapajós in Brazil to mercury. The obtained results so far confirm the protective effect of the consumption of fruit against the exposure to the mercury, but it is only from this year that one will be able to verify if our intervention will have been really effective to sensitize the riverside population of the Tapajós on the importance of eating more frequently the types of fish that have lower levels of Hg. It remains to be verified if these activities will have contributed to an effective decrease of the exposure levels of this population." (Translated from French)</li> </ul>
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<p>➤ “My research has already had an impact, as I was able to use the funds to print poster and pamphlets about my topic to distribute to my research communities and throughout Cuba. This material has been widely embraced, and has been disseminated by the health authority through their existing channels and was added to a widespread health education program they are doing with UNICEF. I believe that this material will help fill a gap in people’s understanding of the issue of ciguatera fish poisoning and will hopefully prevent some people from getting sick. I also was able to provide 5 computers to the Ministry of Health, which will be very useful to them for their work.</p> <p>Based on their experience with me, the Ministry intends to expand their opportunities for ‘foreign’ researchers to work with them in Cuba, as they were very pleased with our collaboration.”</p>		
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## VII. KEY FINDINGS

### Summary of Results

The summarized results are organized by the objectives of the study:

(1) The Ecohealth Awards Program has made a significant contribution to building the capacity of young researchers to apply an Ecohealth Approach to their graduate research and to their following professional activities. Through the training week and the opportunity to conduct fieldwork, the program exposed researchers to an innovative framework for approaching human health problems from an ecosystem perspective. It enhanced awardees' appreciation for the value of transdisciplinarity, stakeholder participation and gender equity in designing and conducting research, and developed the skills required to incorporate these guiding principles into their project work. It also initiated a network of contacts that may support continued collaboration.

(2) Awardees have been active in presenting their research to public and scientific audiences and in communicating results back to the communities that participated in the research. The level of other outputs from the program has been lower than expected, particularly with regard to graduate theses and policy contributions. This finding may be due to the data bias toward recent awardees. However, this points to the potential need for further follow-up with awardees to ensure completion of required outputs (theses) and also to support and encourage dissemination of the results to communities, policy makers, and the scientific community. The recent addition to the award of funding to present results at international conferences received a very positive response from those who stand to benefit from it.

The less tangible product of having scientific or policy influence is more difficult to gauge. However, some awardees described ways in which they felt their research had demonstrated influence.

(3) Most of the past awardees (88%) have continued to apply an Ecohealth Approach to their work or studies. Nearly all past awardees (94%) are currently employed, mostly in universities. Nearly all are engaged in work or study that is linked, directly or indirectly, to their Ecohealth training and research.

(4) The Awards Program has played a significant role in developing and advancing individual careers. It has influenced further research activities and career directions, expanded networks of colleagues and professional contacts, and increased employment potential and academic and professional opportunities, in a few cases leading directly to employment with stakeholders or with IDRC.

(5) It was determined that, aside from the funding provided, the training component was a critical strength of the award. Also, exposure to an international organization, the material resources provided by IDRC, contacts made and the approach itself were

valuable aspects of the award. Awardees were concerned, however, that there were too few opportunities to network with other awardees as well as IDRC staff and trainers. Awardees also expressed concern that there was a lack of field support and follow-up to the training week and to the field research. Suggestions included an increased effort by IDRC and by awardees to maintain an active electronic community of ecohealth practitioners, the publication of an ecohealth field manual, and a follow-up meeting for awardees to present and discuss their research.

## Discussion

The results of this study offer guidance on how the Ecohealth Awards Program could further build capacities of masters and doctoral researchers in Canada and the developing world to conduct Ecohealth research. The findings are particularly relevant in the context of program devolution.

The feedback from awardees indicates that the program has been hugely successful at inducting researchers to the Ecohealth Approach, initiating a network of ecohealth practitioners, and financially supporting the fieldwork component of their studies. After this substantial initial investment, there has been a drop-off in active interest and support from IDRC. Some key areas for support and follow-up have been identified and are discussed here.

### *Field Support*

Some suggestions were made by awardees to increase intellectual and technical support to awardees during their period of fieldwork. Suggestions included continued **mentorship and supervision from IDRC staff and trainers**, an **ecohealth field manual**, and **feedback to final reports**. These suggestions are labour intensive and may not be feasible for the Ecohealth team, in light of their commitments to other program areas. In the context of devolution, however, this level of support may be possible from the networks of Ecohealth experts and practitioners that are currently being developed in the regions. The Ecohealth PI may consider the possibility of producing an Ecohealth manual, as it is something that has been requested by project partners as well.

### *Follow-up*

Suggestions were also made by awardees with regard to the follow-up of research results. These included: **access to awardees' reports and other outputs**, **publication opportunities**, **support for dissemination of results in the communities** where projects were based, and a **follow-up meeting**. The additional funding in recent award years for attending a conference has shown to be a valued form of support in this regard. A second Ecohealth Forum in 2008 will also provide opportunities to showcase outstanding ecohealth research. Issues of access to awardee outputs and publication opportunities could be addressed by an IDRC publication compiling key outputs from the Ecohealth Awards Program. It would be timely to have this ready for release at the

2008 Ecohealth Forum. Also, awardee outputs could be compiled and made available on the Ecohealth Awards web page.

Follow-up is also a concern of IDRC. Staff members have expressed concern at the low number of theses that have been submitted to the centre following completion of the award. This is particularly concerning because one of the main aims of the award is to support graduate research leading to a thesis. The option was discussed to put a hold back on a portion of the funds thereby providing incentive to awardees to send in their theses. This would be problematic from an administrative point of view, as it would require that the project be kept open for two or three years after the award is granted. It would also reduce the amount of funds that awardees could apply to their fieldwork. It was also noted that universities have generally been protective of graduate outputs, further underscoring the responsibility of awardees to submit their theses to IDRC upon completion. It would be valuable in evaluating the overall impact of the Awards Program to know how many awardees completed their degrees after receiving the award, and how many dropped out of their programs. Again, this is difficult for IDRC to trace, and the centre therefore depends on the initiative of awardees to follow-up with this information.

### ***The Network***

Much discussion has centred on the issue of sustaining an active network of awardees. This applies not only to the Ecohealth Awards Program, but also to other IDRC awards and small grants programs. A strong network is critical to facilitating communication flows that promote knowledge and information sharing and can lead to unforeseeable benefits for IDRC, partners and awardees.

What is unique to the Ecohealth Awards Program is that, while other awards programs lack a “hook upon which to build dialogue”, the Ecohealth Approach and the training week offer shared experiences, creating a natural desire amongst awardees to keep in touch.<sup>9</sup> Contact has been maintained between individuals, but it has been suggested that more effort is needed to provide opportunities for group networking.

Suggestions from awardees have included a **follow-up meeting** and a **more active electronic community of ecohealth practitioners**. The 2008 Ecohealth Forum will provide a venue for awardees to meet up again and share results and experiences. Awardees have recognized the need for them to use the Ecohealth listserv more proactively. IDRC staff has noted that electronic communities (e.g. D-Groups) have been set-up in the past but are often under-utilized and that further consideration on how these e-communities can be rejuvenated is needed. It has also been suggested by awardees that more active input to the listserv (including conference notices, job opportunities, information on innovative programs such as AuthorAID) from IDRC would help to strengthen the network.<sup>10</sup> This has been noted as too labour intensive for the

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<sup>9</sup> See Michael Graham, *RoKS Competitive Grants Program: Review and Recommendations*, December 2005 – Draft, pg. 10.

<sup>10</sup> AuthorAID, now in a development phase, is a program of editorial assistance for developing country authors. An article on this program, titled “Closing the ‘Publishing Gap’ between Rich and Poor” is

Ecohealth Program Initiative (PI) staff and should perhaps be considered in selecting partnering institutions through the devolution process. The following suggestion on how to encourage follow-up contact were made by CTAP: to add a link on the Ecohealth Awards web page to 1) the *IDRC Former Awardee* form and 2) the *Awardee Profiles* developed by the IDRC Communications Division.<sup>11,12,13</sup> Another IDRC initiative already in place to encourage networking is the “IDRC History “ wiki.<sup>14</sup> Perhaps a link to this wiki could also be added to the Ecohealth Awards web page.

The weakness of the network may be inherent in its structure, and may be resolved through **regional devolution**. For a network to be strong, there needs to be an optimal amount of linkages. Regional institutionalization would shorten (i.e. strengthen) the network by adding nodes and redistributing connectivity. Awardees would be able to link into the existing Communities of Practice in Ecohealth (COPEHs) in these regions.<sup>15</sup> Further, while geography should not be a barrier in the information age, the regional focus may also offer another ‘hook’ to base dialogue on.

It was also suggested by IDRC staff that the aforementioned publication of Ecohealth Awards outputs would be a networking opportunity in itself. It may be useful to consider other publication and dissemination programs that could facilitate networking.

### ***Devolution of the Ecohealth Awards Program***

The results of this study highlight areas of consideration for regional devolution of the awards program. First, the gap in resources for sustaining an active network of awardees – and the impact that has had on the network – is to be considered in selecting an institution (or institutions) that will take on the management of the awards program. Second, consideration is due to the finding that exposure to an international organization was viewed by awardees as a useful aspect of the award. Third, comments were made by awardees that pointed to the value of having the opportunity to share knowledge and ideas with other awardees working in similar issues in different parts of the world. This global perspective afforded by the training week by IDRC in Ottawa should be considered in planning the training component of a regionalized awards program.

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available on-line at: <http://www.scidev.net/content/opinions/eng/closing-the-publishing-gap-between-rich-and-poor.cfm>

<sup>11</sup> Ecohealth Awards web page is located at: [http://www.idrc.ca/en/ev-70968-201-1-DO\\_TOPIC.html](http://www.idrc.ca/en/ev-70968-201-1-DO_TOPIC.html)

<sup>12</sup> IDRC Former Awardee form is currently located at: [http://archive.idrc.ca/awards/quest\\_form\\_e.html](http://archive.idrc.ca/awards/quest_form_e.html)

<sup>13</sup> Former Ecohealth awardee, Craig Candler, is profiled on the Centre Training and Awards web page: [http://www.idrc.ca/en/ev-71212-201-1-DO\\_TOPIC.html](http://www.idrc.ca/en/ev-71212-201-1-DO_TOPIC.html).

<sup>14</sup> The “IDRC History” wiki is located at <http://sandbox.bellanet.org>. To get a log-in, or for more information about this project, contact: Sachiko Okuda by e-mail at [sokuda@idrc.ca](mailto:sokuda@idrc.ca).

<sup>15</sup> The Ecohealth PI and its partners are developing COPs in Middle East and North Africa (MENA) and Latin America and the Caribbean (LAC).

## **Appendix A**

### **Contributors**

The following people generously contributed their time to provide feedback and share ideas and information during the conduct of this study.

#### **IDRC Staff and Consultants**

**Roberto Bazzani**, Senior Program Specialist, Ecohealth, IDRC, Uruguay

**Rita Bowry**, Senior Program Officer, Centre Training and Awards, IDRC, Ottawa

**Bill Carman**, Senior Communications Advisor (Publishing), IDRC, Ottawa

**Liliane Castets-Poupart**, Research Officer, Centre Training and Awards, IDRC, Ottawa

**Jennifer Chauhan**, Program Assistant, Centre Training and Awards, IDRC, Ottawa

**Céline Corsius**, Program Assistant, Centre Training and Awards, IDRC, Ottawa

**Renaud De Plaen**, Senior Program Specialist, Ecohealth, IDRC, Ottawa

**Anna Dion**, Intern, Ecohealth, IDRC, Ottawa

**Jean-Claude Dumais**, Awards Officer, Centre Training and Awards, IDRC, Ottawa

**Sarah Earl**, Evaluation Unit, IDRC, Ottawa

**Lamia El-Fattal**, Senior Program Officer, IDRC, Cairo

**Francois Gasengayire**, Senior Program Officer, Ecohealth, IDRC, Nairobi

**Michael Graham**, Consultant, IDRC, Ottawa

**Lee-Nah Hsu**, former Team Leader, Ecohealth, IDRC, Ottawa

**Catherine Kilelu**, Research Officer, Ecohealth, IDRC, Ottawa

**Jean Michel-Labatut**, Senior Program Specialist, Ecohealth, IDRC, Ottawa

**Carole Laplante**, Program Assistant, Ecohealth, IDRC, Ottawa

**Jean Lebel**, Director, Environment and Natural Resources Management, IDRC, Ottawa

**Andrés Sanchez**, Senior Program Specialist, IDRC, Ottawa

**Manon Thérien**, Grant Administrator, Ecohealth/RITC/TEC, Grant Administration  
Division, IDRC, Ottawa

**Jean Woo**, Research Officer, RoKS and Biotechnology, Innovation, Policy and Science,  
IDRC, Ottawa

## **Ecohealth Awardees**

**George Agyare**

**Vide Anosike**

**Lauren Baker**

**Claudia Rivera Bilbao La Vieja**

**Craig Candler**

**May Chazan**

**Crescentia Dakubo**

**Nandakumar Divakaran Nair**

**Grace El Azar**

**Sarah Erlichman**

**Chantal Godin**

**Kaneez Hasna**

**Comfort Hassan**

**Elizabeth Hunter**

**Melanie Lemire**

**Joshua Marko**

**Karen Morrison**

**Penina Muoki**

**El hadji Malick Ndiaye**

**Gabriela Nestares**

**Augustus Nuwagaba**

**Patrick Owen**

**Carlos Passos**

**Riziki Shemdoe**

**Olufemi Johnson Tejuoso**

**Tara Tracy**

**Jennifer Webb**

## Appendix B

### Ecohealth Award Recipients (1997 – 2005)

#### **2005: Agricultural transformation, nutrition and human health**

**Baker, Lauren**, York University, *Local Food Networks in Oaxaca, Mexico: Planning and Policy for Agricultural Biodiversity, Food Security and Sustainable Agro-Ecosystems*

**Rivera, Claudia**, University of Buenos Aires, *Agricultural Practices and Food Security: A Case Study of Strategies in the Central Andean Region of Argentina*

**Hunter, Elizabeth**, Université Laval, *The Economics of Dietary Diversity: Examining the Links between Diet, Biodiversity and Food Security in Lebanon*

**Lemire, Mélanie**, Université du Québec à Montréal, *Une approche écosystémique aux sources de sélénium dans l'alimentation en lien avec les pratiques agricoles familiales en Amazonie brésilienne*

**Muoki, Penina**, Jomo Kenyatta University, *Effect of Mango (*Mangifera indica*) Farming on Ecosystem Management, Human Health and Nutrition in a Rural Community of Machakos District, Kenya*

**Ndiaye, Malick**, Université du Québec à Montréal, *Suivi des impacts environnementaux des barrages de Diama et de Manatali dans le bassin fluvial du Sénégal et de leurs incidences sociales : le cas du district sanitaire de Richard Toll*

**Nestares, Gabriela**, Universidad Nacional de Rosario, *Analysis of nutritional status in rural communities of the "Cuna Boscosa" in Santa Fe province, Argentina, from an Ecosystem Approach to Human Health*

**Tejuoso, Johnson**, University of Lagos, *Wetland Uses/Dynamics for Agricultural Purposes and its Health Implications in Lower Ogun River Basin, Lagos, Nigeria*

**Tracy, Tara**, Saint Mary's University, *The Role of Participatory Education in Sustaining Ecosystem and Human Health: An Assessment of Farmer Field Schools in the Ecuadorian Highlands*

**Webb, Jennifer**, McGill University, *Agricultural Transformation, Nutrition and Mercury Contamination in the Upper Amazon*



## **2004: Human Health in the Urban Context**

**Anosike, Vide**, *Water and Waste Management in Urban Farming: Implication on Public Health and Environment for Sustainable Development in Selected Areas of Lagos Metropolis, Nigeria*

**Chazan, May**, *Negotiating Human Health in Rapidly Changing Urban Environments: HIV/AIDS Vulnerability Amongst Street Traders in Durban, South Africa*

**El Azar, Grace**, *Water Uses at the Household Level in the Town of Bebnine and its Relation to Health Conditions*

**Godin, Chantal**, *La dengue en milieu havanais (Cuba): pour passer de facteurs de risque aux facteurs de chance*

**Hassan, Comfort**, *An Ecosystem Approach to the Impact of the Oil Industry on the People and Development of the Niger Delta Region, Nigeria*

**Morrison, Karen**, *Adaptive Responses to the Ciguatera Fish Poisoning in Cuba: A Model for the Caribbean Region, Cuba*

**Parveen, Saila**, *Environmental Health Impacts on Child Waste Pickers of Dhaka and Sustainable Solutions Using an Ecosystem Approach, Bangladesh*

**Yonkeu, Ide**, *Production artisanale du compost à partir des déchets solides urbains : risques de contamination et de toxicité pour les populations impliquées dans le processus et stratégies de réduction des risques, Burkina Faso*

## **2002: Building Concepts and Tools for Assessing Human Health Status Outcomes**

**Candler, Craig**, University of British Columbia, *Changes in Child Health, Land Use, and Local Knowledge in Highland Karen and Thai Communities*

**Demanya, Benoit Klenam**, University of Waterloo, *Ecosystem Health and the Urban Environment: Exploring [proxy] Indicators for Monitoring the Disposal of Solid Waste at the Mallam Dump Site in Accra, Ghana*

**Gareau, Priscilla**, Université du Québec à Montréal, *Analyse écosystémique d'un projet de gestion agricole et communautaire intégré avec les collectivités paysannes de la zone rurale de Tarapoto, en Amazonie péruvienne*

**Grover, Deepika**, York University, *Engendering Community Capital in South Africa: An Ecosystem Approach to HIV/AIDS in the City*

**Owen, Patrick**, McGill University, *Phytochemical Diversity and Human Health: Dietary Change and Type 2 Diabetes Mellitus in Transitional Communities of Papua New Guinea*

**Passos, Carlos José Sousa**, Université du Québec à Montréal (UQAM), *Les liens entre le statut nutritionnel et les niveaux de mercure (Hg) chez des populations riveraines de l'Amazonie brésilienne : sensibilisation communautaire et atténuation des niveaux d'exposition*

## **2001: Economic Factors**

**Dasori, Wuni Peter**, Wilfrid Laurier University, *Ecosystem Health and Sustainable Livelihoods: Exploring the Prospects in Traditional Knowledge and Community-Based Resource Management in the East Mamprusi District, Ghana*

**Divakarannair, Nandakumar**, University of Victoria, *Communities of the "Tail-end" Ecosystem: A Study of the Policies, Resources, and Quality of Life among the Coastal Communities of Kerala, India*

**Marko, Josh**, University of Alberta, *Integrated Impact Assessment of Transportation Alternatives Affecting Ecosystems and Health: An Economic Analysis*

**Nuwagaba, Augustus**, Makerere University, *Changing Character of Livelihood Systems among the Urban Poor Communities and Valued Environmental Components (VECs): Implications for Environmental Health in Uganda*

**Shemdoe, Riziki Silas**, Sokoine University of Agriculture, *Socio-economic Analysis of Ecosystem Conservation Practices in West Usambaras: A Case of Plague Infested Areas of Lushoto District, Tanga, Tanzania*

## **2000: Local Knowledge**

**Agyare, George**, University of Alberta, *Traditional Systems of Conservation and Ecological Resource Use: Exploring the Links Between Local Knowledge, Ecosystems and Health Awareness in Ghana*

**Dakubo, Crescentia**, University of Alberta, *Building on Local Knowledge to Improve Human Health and Ecosystem Management: A Community-Based Approach, Ghana*

**Holtz, François**, Université Laval, *Le plan de communication en santé publique, pour une étude écosystémique de la santé, Cuba*

**Lamah, Ouo-Ouo**, Université de Conakry, *Ecosystem, food habits and prevalence of pulmonary paragonimiasis in Guinea*

**Owiti, John Arianda**, McGill University, *Indigenous Ethnomedical Knowledge and Practice: A Comparative Study of Health and Illness among Semi-nomadic, Sedentary, and Urban Communities in Turkana District, Kenya*

**Roberts, Dianne**, University of Waterloo, *Local Knowledge and Community Participation in Managing and Protecting Water Quality in the Great River Watershed, Grenada: An Ecosystem Approach*

**Torres-Lara, Ricardo**, University of British Columbia, *Values and Perceptions of Resource Use and Human Health: The Case of a Stressed Coastal Community in Yucatan, Mexico*

## **1999: Gender**

**Erlichman, Sarah and Terrefe, Gelila**, York University, *Environment and Gender in Development: A Case Study of Resettlement in Ethiopia in the 1980s, Ethiopia*

**Gaspar, Elizete**, UQAM, *Santé/maladie et environnement en Amazonie brésilienne, Brasil*

**Mera-Orcés, Véronica**, Wageningen Agricultural University, *Natural Resource Management and Social Relations of Gender in a Community under Environmental Stress: A Case Study in the Ecuadorian Highlands, Ecuador*

**Mulumba, Deborah and Angura, Tobias Onweng**, Makerere University, *Natural Environment and Human Health in the Context of Gender and Social Relations in Lira District in Uganda*

## **1998: Understanding the Ecosystem<sup>16</sup>**

**Ahlawat, Muni and Annmarie Isler**, Centre for Environmental Health Activities (CEHA), *Community Health in the Zarqa River Basin: A study of the impacts of development on community health with respect to water management, Jordan*

**Chalifour, Mireille**, York University, *Indigenous Women's Knowledge and their Role in Community-based Environmental Health Education Within an Integrated Ecosystem, Ecuador*

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<sup>16</sup> No training was held in 1998

**Hasna, Mahbuba Kaneez**, Women for Women: A Research and Study Group,  
*Gender Analysis in Urban Ecosystem Approaches to Human Health in  
Bangladesh, Bangladesh*

**Roest, Nellie**, Dalhousie University, *Opportunities for Environmental Health Risk  
Management: A Case Study of the Point Lisas Industrial Estate in Trinidad*

**1997: Ecosystem Approaches to Human Health Training Award  
with a Particular Focus on Gender<sup>17</sup>**

**Carrasco, Noelia**, Universidad Catolica de Temuco, *Water and Illness  
Prevention in the Mapuche Community of Pucara, Maquewe (Ethnography),  
Chile*

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<sup>17</sup> No awards competition was held in 1997, only the one award was given to Noelia Carrasco

## **Appendix C**

### **Methodology**

#### **Survey Instrument and Design**

A questionnaire was designed in collaboration with Ecohealth team members (Lamia El-Fattal, Lee-Nah Hsu, Catherine Kilelu, Renaud de Plaen, and Andrés Sanchez) and Sarah Earl of the IDRC Evaluation Unit. The survey was in English and awardees were invited to respond in English or French. It was pre-tested with three past awardees in Canada and overseas. As a result, some questions were revised.

#### **Data Quality**

The questionnaire was sent to all 48 past and current awardees and 27 completed surveys were returned, giving the study a 56% response rate.<sup>18</sup> Three awardees sent confirmations to participate but did not return a survey; 11 awardees did not respond; six awardees were not reachable by e-mail due to inactive addresses (surveys were also sent to these awardees by post but yielded no response); and one awardee is deceased.

While distribution of the respondents by country of nationality was fairly representative of the awardee population, distribution by region of nationality and by award year was less so. Data was particularly biased toward current 2005 awardees, where the distribution of respondents exceeded that of the awardee population by 16.2%.

#### ***By Nationality***

For all countries of nationality except Canada and Nigeria, the distribution of respondents was  $\pm 2.6\%$  compared with that for awardee population. The distribution of Canadian respondents exceeded the awardee population by 6.1% and that of Nigeria exceeded it by 4.8%.

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<sup>18</sup> The total number of successful applicants of the award from 1997 to 2005 is 50. However, two recipients declined the award.

**Table 15. Distribution of Respondents versus Awardee Population (by country of nationality)**

<b>Country of Nationality</b>	<b>Awardee population (%)</b>	<b>Survey respondents (%)</b>
Canada	45.8	51.9
Argentina	2.1	3.7
Bangladesh	2.1	0.0
Bolivia	2.1	3.7
Brazil	4.2	3.7
Cameroon	2.1	0.0
Chile	2.1	0.0
Ecuador	2.1	0.0
Ghana	6.3	3.7
Grenada	2.1	0.0
India	2.1	3.7
Kenya	4.2	3.7
Lebanon	2.1	3.7
Mexico	2.1	0.0
Nigeria	6.3	11.1
Sénégal	2.1	3.7
Tanzania	2.1	3.7
Uganda	6.3	3.7

The distribution of ASRO, MERO and SARO respondents was  $\pm 1.6\%$  compared with that for awardee population. The distribution of ESARO respondents exceeded the awardee population by 6% and LACRO and WARO distributions fell short by 5.6%.

**Table 16. Distribution of Respondents versus Awardee Population (by region of nationality)**

<b>Region of Nationality</b>	<b>Awardee population (%)</b>	<b>Survey respondents (%)</b>
Canada	45.8	51.9
ASRO	0.0	0.0
ESARO	12.5	18.5
LACRO	16.7	11.1
MERO	2.1	3.7
SARO	4.2	3.7
WARO	16.7	11.1

### ***By Award Year***

The distribution of 2005 respondents exceeded the awardee population by 16.2%. For award years between 2001 and 2004, the distribution was  $\pm 2.3\%$  compared with that for population and the relative distribution fell short for award years between 1998 and 2000 by between 5.1% (2000) and 8.8% (1998, 1999).

**Table 17. Distribution of Respondents versus Awardee Population (by award year)**

<b>Award Year</b>	<b>Awardee population (%)</b>	<b>Survey respondents (%)</b>
2005	20.8	37.0
2004	20.8	22.2
-	-	-
2002	10.4	11.1
2001	12.5	14.8
2000	12.5	7.4
1999	12.5	3.7
1998	12.5	3.7
1997	2.1	0.0

### **Survey Administration**

An invitation letter to participate in the study initiated contact with awardees. The letter, sent by e-mail, also served to test activity of e-mail addresses on file. It was translated into French and Spanish, and different language versions were sent to awardees according to their language preference on record. The letter is included in Annex B: Forms.

Two weeks later, questionnaires were sent by e-mail. Questionnaires were sent by post to those who had inactive e-mail addresses. Follow-up reminders were then sent at two-week intervals. Upon receipt of the completed surveys, IDRC greeting cards were sent as an expression of appreciation for participating in the survey.

## Appendix D

### Forms

#### **Form 1: Invitation Letter (English)**

November 7, 2005

[Awardee]

[Address]

Dear [Awardee Name],

We are contacting you as a recipient of the Ecohealth Graduate Training Awards Program. IDRC is currently conducting an evaluation of the Awards Program and would greatly value your input to this process.

In the upcoming weeks we will be administering an electronic survey to past Awardees of the Program. We invite you to participate in this survey and in doing so, to help us learn from your unique experience of the Program. Please note that the survey will be in English; a French language version will be made available upon request. We guarantee confidentiality and ensure that the information you provide will be maintained in a secure environment.

The Awards Program has now supported 44 young researchers both in Canada and in developing countries, and will be entering its 8<sup>th</sup> year in 2006. As IDRC plans for the future of the Program, we wish to broaden our awareness of its impacts, based on the experiences of the Awardees who have contributed to its success.

We would be grateful for your confirmation on participation at your earliest convenience, preferably by 10<sup>th</sup> November. In your confirmation, please include your current contact information (mailing address, e-mail address and telephone number) so that we may update your file.

Should you have any queries or require any further information, please do not hesitate to contact Jessica White by email: [jwhite@idrc.ca](mailto:jwhite@idrc.ca), or by telephone: +1 613 236 6163 ext. 2263.

Thank you in advance for your participation. We look forward to hearing from you!

Lee-Nah Hsu  
Team Leader  
Ecosystems Approaches to Human Health



## **Form 2: Survey Instrument**



### **ECOHEALTH RESEARCH AWARDEE SURVEY**

This questionnaire will be used by IDRC to help evaluate the Ecohealth Research Awards Program. As one of the 44 awardees that have participated in the program since 1998, your experience of the Awards Program is extremely valuable to this process. We appreciate the time you are taking to provide us with your input.

In the following sections, we will ask questions about how the award effected your knowledge and career development. We would like to get a better idea of where you are now and if your current activities incorporate an Ecohealth approach. We would also like to track the outcomes of your research.

The estimated time to complete the survey is about 45 minutes. Please note that this time will vary according to your answers.

#### **I. AWARDEE PROFILE**

**1a. What was the primary field of study for your degree in progress at the time of receiving the award? 'Click' on the box to select.**

- ☐ Arts/ Humanities
- ☐ Social Sciences
- ☐ Natural Sciences
- ☐ Health Sciences
- ☐ Other



Please specify:

<b>1b. Please give the name, department and country of the institution which granted you this degree</b>	
Name of institution	
Department or Faculty	
Country	

<p><b>2. How did you first hear of the Ecohealth Research Award Program?</b></p> <p><input type="checkbox"/> Other researchers</p> <p><input type="checkbox"/> IDRC publication</p> <p><input type="checkbox"/> IDRC website</p> <p><input type="checkbox"/> IDRC program staff</p> <p><input type="checkbox"/> IDRC regional office</p> <p><input type="checkbox"/> IDRC recipient</p> <p><input type="checkbox"/> University</p> <p><input type="checkbox"/> Other</p>
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Please specify:
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## **II. IMPACT OF RESEARCH AWARD ON SKILLS AND CAPACITIES**

### **KNOWLEDGE AND CAREER DEVELOPMENT**

- 3. Did you gain any new knowledge and/or skills from your participation in the Awards Program? Please explain.**

- 4. Describe how the experience and knowledge gained during this award has been of use in the development of your career.**

5. **Did you participate in an Ecohealth Awards Training by IDRC in Ottawa? If yes, did you find it useful?** Please explain.

#### OUTPUTS AND OUTCOMES

6. **What were the outputs of your participation in the Awards Program?** Please check the applicable boxes and provide detailed information below. Also, we encourage you to attach any relevant documentation (including URLs), if possible.

- ☐ Thesis
- ☐ Peer reviewed publication
- ☐ Scientific or public presentation of research results
- ☐ Policy brief
- ☐ Presentation of policy recommendation to a policy or decision-makers audience
- ☐ Feedback of results to key actors or stakeholders (including communities)
- ☐ Other

Thesis	Details:
Peer reviewed publication	Details (Journal title, publication date):

Scientific or public presentation of research results	Details (Date, name of conference, workshop, etc.):
Policy brief	Details:
Presentation of policy recommendation to a policy or decision-makers audience	Details:
Feedback of results to key actors or stakeholders (including communities)	Details:
Other	Please specify:

**7. Has your research had any demonstrable influence, scientific or otherwise?** Please explain.

### III CAREER AND PROFESSIONAL ACTIVITIES

#### EDUCATION AND EMPLOYMENT

8. Since the receipt of your award, have you received any additional formal education?

☐ Yes

☐ No (go to question 10)

9. If yes, please list the type of educational or training program, the location of the institution (or research) and the year completed (or expected date of completion).

i.	Name of Degree/Program	Discipline
	Location	Year Completed
ii.	Name of Degree/Program	Discipline
	Location	Year Completed

10. Current employment

a. Title	
b. Institution	Note: Include department or program where applicable
c. Country	Note: If you are conducting fieldwork in a country other than that where you study, please specify

d. **Please describe your key area of work or study**

#### **ECOHEALTH APPLICATIONS**

11. **How do you define an *Ecohealth approach*?**

12. **Have you applied an Ecohealth approach to your work or study since your participation in the Award Program?**

☐ Yes

☐ No

13. **If no, please explain the reasons for not applying an Ecohealth approach**

14. **What are the key challenges faced in applying an Ecohealth approach?** Please specify if your comments refer to your experiences *during* or *since* your award period, or both.



15. **What are the factors that help(ed) or facilitate(d) the application of an Ecohealth approach?** Please specify if your comments refer to your experiences *during* or *since* your award period, or both.

16. **Have you maintained any contact (by e-mail, telephone, visit, etc.) with any of the people you met during your participation in the Awards Program, including related or follow-up project work?** Please check all boxes that apply.

- ☐ Fellow awardees
- ☐ Staff at IDRC
- ☐ Trainers
- ☐ Stakeholders

#### **IV DIRECTION FOR THE ECOHEALTH AWARDS PROGRAM**

**17. Please prioritize the following components from most (1) to least (5) useful:**

☐ Financial support

☐ Training

☐ Network/contacts

☐ Exposure to an international organization

☐ Other (Please specify) \_\_\_\_\_

**18. What are the most useful aspects of the award? Please elaborate on your choice.**

**19. What are the least useful aspects of the award? Please elaborate on your choice.**

**20. Are there any additional elements that could improve the award?**

21. **Please give us your comments on the administration of your award by IDRC. How could the Centre have better facilitated your research experience?** Issues to consider may include: clarity of communications, frequency of contact, quality of resources (including the Listserv), etc.

22. **Would you like a copy of the evaluation report?**

☐ Yes

☐ No



Mailing Address	
Street/No.	
City	
Country	

23. **Would you be willing to discuss some of your responses in a short telephone interview?**

☐ Yes

☐ No



**PERSONAL IDENTIFICATION**

Please provide the following information so that we may contact you for an interview. All communication between you and IDRC, including this survey, will be kept confidential.

Name:		
Telephone:		
Best time to call:		AM
		PM

**THANK YOU FOR COMPLETING THIS QUESTIONNAIRE**

**YOUR INPUT IS APPRECIATED!**

## Appendix E

### Respondents' Definitions of an *Ecohealth Approach*

- “The EcoHealth approach is a methodology that incorporates three principles: transdisciplinarity, participation, and gender and equity. The methodology is used to gain broad perspectives on how research questions and outcomes can have multiple results for multiple actors. It is integrative and innovative in its combination of environmental sustainability and social justice issues.”
- “Looking at the politico-economic, socio-cultural and biogeophysical factors that influence health (or whatever you are studying)”
- “An approach that takes a more holistic view of health by not just focussing on disease causing pathogens but also taking into consideration the health and quality of the broader environment in which people live.”
- “Factoring Environmental health in development activities”
- “EcoHealth approach is a holistic approach that seeks to determine health problems of communities and people and proffer effective solution to it as well. It involves examining health problem from a multidisciplinary framework.”
- “An approach to a human health problem that has links to the ecosystem. Community participation, working in a transdisciplinary fashion, and acknowledging that gender roles are different, are all pillars of the ecohealth approach.”
- “An ecohealth approach attempts to link changes in (or current states of) public health (could be group health) to changes in (or current states of) environmental conditions, though a focus on the lived experiences of those who are experiencing problems and the use of both epidemiological and ecological data.”
- “A holistic approach which recognizes that links between humans and their environment determines human health, based on three pillars: social and gender equity, transdisciplinarity and stakeholder participation.”
- “...an integrated approach to research or intervention that aims to understand how social and ecological factors interact to differentially impact on the health status of various social groups, and to devise intervention strategies that mutually protect those ecological factors whilst improving human health.”
- “A holistic approach to understanding of the linkages and inter-dependencies between human health and their immediate and wider environment – the environment in which the sets and subsets of ecosystem structure is connected to the human society.”
- “...an approach that examines health in a holistic way to include relationships with the physical, social, political, economic environments surrounding an individual and his/her family and community. Total health (or well-being) is a symbiotic relationship between a healthy individual and healthy (well-functioning, sustainable) and supportive environments.”
- “Interdisciplinary, holistic, ecosystemic, participatory and integrating gender and equity considerations.”
- “An interdisciplinary strategy to address a health-related research question, recognizing that human health is a result of complex interactions between social, environmental, economic and cultural factors.”
- “The ecohealth approach is a means to improve the health of populations by better ecosystem management, multi-sectoral and inter-disciplinary coordination, a functioning protocol well established and respected, the appropriation of the adequate technologies and social participation. While calling upon several domains of knowledge to arrive at understanding a given environment, a better management of the ecosystems can be conceivable. This must be done by a joint work between researchers, groups and [instances politiques] to succeed in integrating all the necessary parameters to the comprehension of an environment and to form the necessary team to effect a consequent change aiming at the improvement of life conditions of the population.”
- “An ecohealth approach is a theoretical and methodological framework which looks forward to improve ecosystems` and people health.”

- “Ecohealth approach is a holistic approach that acknowledges man is a social being that is an integral part of the ecosystem and the state of the physical environment directly influences human health. Ecohealth approach seeks to ensure that human beings meet their needs without compromising the ability of future generations to meet their own needs. It recognizes transdisciplinarity as essential in meeting the needs of the vulnerable communities.”
- “Conceptually, an ecohealth approach is concerned with the multidimensional nature of human health—understanding how social, biological, economic, political and environmental factors interact to influence human health. This suggests interventions to improve health should move beyond a biomedical model to make changes in key systemic drivers of health. Methodologically, the approach advocates a transdisciplinary orientation, conducting research at the community level with input from various community members and stakeholder groups, and collected/ analyzed in a gender-sensitive and equity-oriented manner.”
- “An ecosystem and integrated approach on health with social, environmental and economic levels.”
- “...an ecohealth approach is one that understands health to be a complex product resulting (in humans, animals, bioregions) from interactions between the various systems (biological, chemical, cultural, political, economic, spiritual, technological, etc.) of which we are a part.”
- “It is an approach that integrates participation, gender equity and transdisciplinarity in solving problems.”
- “...I see an Ecohealth approach as being based in the understanding that human health is a reflection of the environment which humans inhabit. However, more than just considering environmental connections to human health – social and economic linkages are also viewed as playing a crucial role in impacting the health of an ecosystem and thus the health of those who live there. In short, it is a holistic approach which incorporates the economic, environmental and social needs of a community in order to find relevant and more sustainable approaches to building human health and welfare.”
- “As an integrated approach which points out the human as the principal actor among environmental, health and social issues.”
- “The Ecohealth or the Ecosystem approach to human health is a holistic method that takes into account socioeconomic and cultural factors as well as people’s behaviours in managing the ecosystem. It stresses on the interrelationship among these factors and its impact on the environment. Other than the 3 main pillars adopted, (multidisciplinarity, gender equity and community participation) the approach is characterized by a key element and that is sustainability or sustainable development.”
- “Ecohealth is an integrated method of analysis that gives concern to ideas and inputs of both male and female studied population, their community and institutional heads especially as it relates to human health and the environment.”
- “An ecosystem approach considers political, social, economic and cultural aspects of a problem affecting the health of a population, while putting the human being at the centre of this problem. This approach is supported by interdisciplinary and participatory methods, and is sensitive to questions of this kind. The employment of an ecosystem approach to human health is well to recognize all of these aspects.” (Translated from French)
- “It is a research approach that links the environment, economic and social aspects of our society with the health of people, with multi-disciplinary approach and consideration for the local people participation and gender composition of the development and the effects.”