



# APN CAPaBLE

**- Making a Difference -**

Scientific Capacity Building & Enhancement for Sustainable Development in Developing Countries

## **Training Seminars on Methodological Issues Related to the Human Dimensions of Global Environmental Change**

**Final Report for APN CAPaBLE Project:**

**2004-CB06NSY-Rhaman**

**Project Leader: Aminur Rhaman**

# **Training Seminars on Methodological Issues Related to the Human Dimensions of Global Environmental Change**

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Final Report submitted to APN**

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## Overview of project work and outcomes

### Non-technical summary

IHDP, in collaboration with the co-organizing partners of the 6<sup>th</sup> Open Meeting, the world's largest social science conference on Global Environmental Change research, decided to take concerted efforts to use this unique opportunity for the systematic promotion of young scientists, particularly those from developing and emerging economies from all regions of the world, to interact, cross-link, and exchange information on various methodological aspects of global change.

Four Pre-Open Meeting Training Seminars took place from October 6 - 8, 2005 in Königswinter, Germany. These capacity building activities focused on methodological issues related to research questions on the human dimensions of global environmental change, with topics linked to IHDP core projects and the Earth-System-Science projects. Not only did these seminars make an effort to develop concrete skills and give state-of-the-art information and knowledge about the topics in question, but they also sought to enhance collaboration and networking between the young researchers and the broader Global Environmental Change research community. To foster integration with the core projects of IHDP, key scientists linked to the IHDP networks volunteered to take up on the training mandate for three days. The four training seminars proved to be an exiting and challenging interactive exercise, which enabled young researchers from all over the world to meet with top researchers to learn from each other and feel inspired for further collaboration.

### Objectives

The present project aimed to:

- develop concrete skills,
- give state-of-the-art information and knowledge about the topics in question, and
- enhance collaboration and networking between the young researchers and the broader Global Environmental Change research community.

### Amount received and number years supported

The Grant awarded to this project was:

- US \$45,000 for Year1

### Work undertaken

After topics of the training seminars, trainers and concept papers were set, a competitive call for training seminar applications was announced in October 2004, with all applications

received by December 2004. Then began a thorough vetting of the applications by the members of the scientific training board (the trainers for the workshop as listed below). This selection process was overseen and facilitated by the IHDP Secretariat.

The criteria for choosing participants were: the quality of their previous work and application; their relevance to the training module in question and level of previous experience in this field; and finally a look at gender and regional balance.

Announcements on acceptance of the 60 chosen applicants (out of nearly 300 that applied) went out in March 2005, in plenty of time to arrange visa and travel arrangements (done by the IHDP Secretariat) for the 60 training seminar participants.

## **Results**

The four training seminar went off as planned, with very positive feedback from trainers and the participants themselves. The four topics of the training seminars, each with 15 participants from different geographical regions and generally 2 main trainers with up to 4 co-trainers, were as follows:

- 1) Urbanization and Global Environmental Change**
- 2) Understanding Vulnerability to Global Environmental Change in the Context of Globalization**
- 3) Analysis of Spatial Data for Human Dimensions Research - User Workshop**
- 4) Training Seminar on Economic Methods for Global Environmental Change Research**

## **Relevance to the APN CAPaBLE Programme and its Objectives**

These workshops focused primarily on capacity-building for young and aspiring scientists, predominantly from developing countries and emerging economies, as well as on strengthening existing global environmental change knowledge, methodologies and networks. Thanks to APN CAPaBLE's generous contribution, over a third of these participants were from the Asia-Pacific region.

## **Self evaluation**

Feedback from participants and trainers was all very positive. The participants very much enjoyed not only the intense training but also the opportunity to network with other young

researchers, particularly given the confluence of activities provided by START's training activities, as well as a meeting of the Young Human Dimensions Researchers Network and finally the Open Meeting itself.

This format of combining a series of training workshops with a large international conference proved to be very popular and a successful way of combining events to maximize effectiveness and minimize costs of bringing in participants and trainers.

Several of these participants applied and were successfully accepted to IHDP's next big capacity building event, the collaborate effort with APN at the 5<sup>th</sup> International Human Dimensions Workshop in Chiang Mai, Thailand, for 2 weeks in October 2006. Thus it can already be seen that many of these participants who entered our networks for the first time at these capacity-building training seminars in 2005 would like to continue their collaboration with IHDP.

Finally, we noted that this kind of week-long series of activities proved to forge a coherent, bonded group of individuals who then came into the Open Meeting with a new appreciation of this collaboration, a finely-tuned presentation of their work as well as a very keen understanding of the various topics discussed and the structure of IHDP's networks. As most of the training seminar participants were also involved in the Open Meeting as poster presenters or oral presenters, we found that their level of interaction and involvement was quite high.

However, as an example of something to work on in the future, particularly at large international conferences, we should find more creative ways to form sessions as well as involve young researchers – for example, more round table formats as opposed to panel formats, or more “35 and under” sessions where a senior researcher or scientist could be involved as liaison but not giving the speech. It is also always a difficult task to get participants to take an interest in and attend poster sessions, so this is an ongoing debate when planning conferences and involving young researchers.

### **Potential for further work**

The format of these training seminars was very successful and will no doubt be repeated. This is particularly of interest in the context of the Open Meetings, of which the next one will be taking place in Delhi, India in 2008.

As a very concrete follow-up in IHDP's capacity-building activities, the next IHDW (International Human Dimensions Workshop), a joint IHDP-APN effort on “Institutional Dimensions of Global Environmental Change: Water, Trade and the Environment,” whereby

the IDGEC project and USER at Chiang Mai University are provided scientific input and guidance. This workshop is taking place in October 2006 in Chiang Mai, Thailand, and many of the same methods as well as trainers and a few participants have been repeated – thus providing a concrete follow-up in some of the ideas and methodologies of the 2005 capacity-building training seminars discussed in this report.

## **Publications**

While there are no publications specifically relating to only the Training Seminars, a series of two volumes of best examples in human dimensions research, with specific reference to material presented at the 2005 Bonn Open Meeting, is now in the process of being edited with a view towards publication in 2007 with Nomos.

An entire edition (1/06) of the current IHDP quarterly newsletter, *Update*, is dedicated to the 6<sup>th</sup> Open Meeting and the preceding training seminars. The Open Meeting website, <http://openmeeting.homelinux.org>, continues to house and publish new information on papers, photos, presentations, etc.

Information on the training seminars is located at [http://openmeeting.homelinux.org/training\\_seminars.asp](http://openmeeting.homelinux.org/training_seminars.asp).

## **Acknowledgments**

Starting in January 2005, the Training Seminars were coordinated by Ike Holtmann in the IHDP Secretariat, who did a fantastic job. Thanks to student assistant Gloria Gonsalvez for coordinating travel arrangements, Anja Hesse for helping to edit the Open Meeting abstract book, visiting scholar Tian Yanyu for help with visas and database maintenance, IHDP staff member Ali Khan for all web-based materials, and student assistant Sebastian Homm for help with communicating with participants.

Finally, due to the further generous support of the Inter-American Institute for Global Change Research (IAI), the German Ministry for Education and Research (BMBF), the German Research Foundation (DFG), the Center for International Earth Science Information Network (CIESIN), the SysTEM for Analysis, Research, and Training (START), United Nations University (UNU), the Norwegian Research Council, the University of Cologne, the Kiel Institute for World Economics and the Foundation “International Encounters” of the savings bank Cologne/Bonn, IHDP managed to invite 60 young scholars to join into this capacity building event and to also stay on for the 6<sup>th</sup> Open Meeting in Bonn.

# Technical Report

## Abstract

Four Pre-Open Meeting Training Seminars took place from October 6-8, 2005 in Königswinter, Germany. These capacity building activities focused on methodological issues related to research questions on the human dimensions of global environmental change, with topics linked to IHDP core projects and the Earth-System-Science projects. To foster integration with the core projects of IHDP, key scientists linked to the IHDP networks volunteered to take up on the training mandate for three days. The four training seminars proved to be an exiting and challenging interactive exercise, which enabled young researchers from all over the world to meet with top researchers to learn from each other and feel inspired for further collaboration. The themes/ topics of the four training seminars were 1) Urbanization and Global Environmental Change; 2) Understanding Vulnerability to Global Environmental Change in the Context of Globalization; 3) Analysis of Spatial Data for Human Dimensions Research; and 4 Economic Methods for Global Environmental Change Research.

In order to enhance collaboration and networking between the young researchers, START successfully organized its follow-up **Packard Institute on Urbanization** together with the training seminars at the same venue. A half-day **community-building event** also took place with all participants (80 in total), organized by the Young Human Dimensions Researchers (YHDR) Network on Sunday, October 9<sup>th</sup>. This close collaboration had a positive cross-fertilization effect and enabled participants to use the skills learned at the workshops not only at the ensuing Open Meeting, but also to continue their research and networking beyond their week in Germany.

## Table of Contents

### 1.0 Introduction

The following four training seminars took place from 6-9 October 2005. Under the title of each training seminar, there is a listing of the trainers and co-trainers, the scientific concept paper/ background of the workshop, its original goals and the outcomes.

## 2.0 Conference Outputs

### 1) Urbanization and Global Environmental Change

**Trainers:** Frauke Kraas, University of Cologne/Germany, and Roberto Sanchez, University of California, Riverside/USA

**Co-Trainers:** William Solecki, Hunter College, City University of New York, USA; Karen Seto, Stanford University, Stanford, USA; David Simon, Centre for Developing Areas Research (CEDAR), University of London, UK

#### **Scientific Concept:**

Urbanization - both as a social phenomenon and a physical transformation of landscapes - is one of the most powerful, irreversible, and visible anthropogenic forces on Earth. Many of the most important and significant changes associated with the impact of globalization are taking place in urban areas. They are complex and dynamic systems that reproduce within their territory the interactions among socioeconomic, geopolitical, and environmental processes at local, regional, and global scales. Many of the most important and significant changes associated with the impact of globalization are taking place in urban areas. More than half of the world's population, approximately 3.3 billion people, is estimated to live in urban areas. According to some projections, over 60 percent of the world's population will live in cities by 2030. The current world average annual rate of urbanization is 0.8 percent, but this rate varies widely, from about 1.6 percent for all African countries to about 0.3 percent for all highly industrialized countries. More than 90 percent of future population growth is likely to be concentrated in cities, and mainly in developing countries.

Rapid growth of population and its concentration in urban areas have significant implications for the long-term outlook for humanity. Burdened with many problems associated with growth, urban areas are increasingly subject to dramatic crises. This is especially true in poor countries where economic and financial crises, together with fast and unbalanced growth of urban areas, have created fragmented spaces with high spatial segregation that aggravates the social exclusion characteristic of those societies. The aforementioned problems play an important role in the interactions between urban areas and global environmental change. These interactions create a diversity of impacts that can be grouped in two broad categories: those originating in urban areas that have a negative effect on global environmental change, and global environmental changes that have negative effects on urban areas. Despite their growing importance, urban areas have been understudied in the analysis of global environmental change, with a majority of research placing emphasis on the impacts of urban areas on global environmental change. Research



efforts focus particularly on the contributions of emissions of greenhouse gases and the heat island effect to global climate change. Much less attention has been devoted to the study of the impacts of global environmental change on urban areas and the people who live in them. Particularly critical are the conditions in poor countries.

**Aims and focus of the training seminar:**

Against this background it is the goal of the training seminar to provide researchers (particularly young and/or developing country researchers) to develop a better understanding of the interactions and feedbacks between global environmental change and urbanization at the local, regional, and global scales. It follows a multidisciplinary and interdisciplinary perspective and wants to introduce into innovative conceptual and methodological approaches. It puts emphasis on global environmental change both as driver and outcome of human (economic, political, cultural, and social) and physical (urban structure, expansion, and land use) processes in urban areas. Candidates must already have solid knowledge of urbanization processes in developing countries.

**Practical aspects of the workshop:**

This group aimed at a better understanding of the interactions and feedbacks between global environmental change and urbanization at the local, regional, and global scales. It followed a multidisciplinary and interdisciplinary perspective. Trainers introduced innovative conceptual and methodological approaches.

The four thematic foci of the seminar covered the array of interactions between the urban and the global environment components of the Earth system as much as possible in this short time of only two and a half days. It started with processes within the urban system that contribute to global environment change. A second focus has been put on the pathways through which specific global environmental changes affect the urban system. It also addressed the resulting interactions and responses within the urban system. Finally, it dealt with the interactions within the urban system on global environmental change, or feedback processes. These four thematic foci create a comprehensive perspective of the dynamic, diverse, and complex interactions between urban systems and global environmental change processes.

The topics of this training seminar stretched from biophysical processes across global socioeconomic changes to urbanization and health issues. Trainers and participants looked at case studies from all over the world, discussed potential inter-linkages for interdisciplinary research approaches and tried to position their own research activities within the IHDP networks in order to benefit from already existing research activities and results.

All 4 topics were addressed with selected examples of different urban areas, illustrated by figures, documents, photos and diagrams, and included a discussion of best practices. Instructors included experienced scholars and practitioners from urban planning and urban analysis background.

## **2) Understanding Vulnerability to Global Environmental Change in the Context of Globalization**

**Trainers:** Karen O'Brien, University of Oslo, Norway; Janos Bogardi, United Nations University- Institute for Environment and Human Security, Bonn, Germany, and Claudia Pahl-Wostl, University of Osnabrück, Germany

**Co-Trainers:** Eric Crasswell and Marcel Endejan, Global Water System Project Office, Bonn, Germany; Michael Bollig, University of Cologne, Germany; Jörn Birkmann, United Nations University- Institute for Environment and Human Security, Bonn, Germany; Sabine Möllenkamp, University of Osnabrück, Germany

### **Scientific Concept:**

The 6<sup>th</sup> Open Meeting of the Human Dimensions of Global Environmental Change Research Community focuses on Global Environmental Change, Globalization and International Security. One important point related to this theme is that globalization is not only driving global environmental change, but also conditioning responses and outcomes by influencing vulnerability and resilience to environmental changes. Globalization is transforming the ability of households, nations, regions, and social groups to respond to environmental change in both positive and negative ways. Research on the human dimensions of global environmental change contributes to a deeper understanding of how globalization enhances or reduces vulnerability, and how the two processes of change together interact to influence human security.

In this training seminar, we will examine vulnerability to global environmental change in the context of globalization, and consider the implications for response strategies, including adaptation. Focusing on water, we will explore how globalization intersects and interacts with global environmental change to influence the drivers of change, and the responses to change. Modifications of the global water cycle probably have the greatest potential to affect human livelihoods and nature. Excess, insufficient, or poor quality water can harm human well-being directly, and damage infrastructure and food production systems. Furthermore, damage to freshwater and marine ecosystems leads to loss of biodiversity and a cascade of consequential environmental changes that in turn affect human security. These

changes are occurring amidst rapid economic, political, and cultural transformations associated with globalization. Globalization is influencing both water availability and access through growing competition among different users (e.g., agriculture, industry, tourism, or municipal), privatization of water systems, and other institutional reforms. The seminar will look specifically at how these changes influence vulnerability to global environmental change, and consider policies and actions that can be taken to enhance human security.

The training seminar will be divided into three modules, followed by an exercise related to vulnerability and adaptive management of water resources in the context of globalization.

- 1) Vulnerability in a globalizing world (discussion of the social and biophysical drivers of change; discussion of concepts of vulnerability, adaptive capacity, adaptive management, and human security)
- 2) Assessing vulnerability in the context of globalization (methods to assess vulnerability, adaptive capacity, and adaptive management, including the collection and management of data)
- 3) Addressing vulnerability in the context of globalization: adaptive management of water (including case studies)

#### **Practical aspects of the workshop:**

This training seminar was tightly focused around understanding and assessing human vulnerability from the perspective of various discourses, using a range of methodologies, in light of a host of competing stresses. Particular emphasis was placed on the themes of water (both abundance and scarcity under global environmental change) and the context of globalization. The course content was delivered through a variety of means, including formal lectures, group activities, role playing and group discussions. There was general agreement that vulnerability is a dynamic concept related to multiple processes, but the precise definition of vulnerability and appropriate methodologies for measuring it (or, indeed, the appropriateness of measuring it) were extensively debated by participants.

Among other activities, trainer Karen O'Brien asked the participants to step outside their pre-conceived notions of how we think about the concept and assigned them to work within various discourses (biophysical, human-environment, critical and transformational globalization) to both explain and propose solutions to a large-scale human and environmental disaster, the impact of Hurricane Katrina on New Orleans. This example managed to illustrate many of the recurring themes of the workshop: multiple stresses, nested scales, the role of institutions, political discourse, uneven development, the role of technology, human security and the idea of "winners and losers". These themes were further explored in subsequent exercises led by other facilitators to give participants an appreciation of the many voices and challenges of vulnerability assessment in various

contexts.

As a whole, the training seminar, as well as the large Open Meeting that followed it, provided a broad overview of recent research findings and advances in the conceptualization of various aspects of the interactive effects of human security and the natural environment in the context of global environmental change and globalization. The new contextual and conceptual frameworks in which the otherwise much explored research topics were situated provided a stimulus for reconsidering old problems and approaches for addressing them from a new perspective.

### **3) Analysis of Spatial Data for Human Dimensions Research - User Workshop**

**Trainers:** Alex de Sherbinin and Adam Storeygard, CIESIN at Columbia University, USA; Günther Menz, Matthias Braun and Hans Peter Thamm, University of Bonn, Germany.

#### **Scientific Concept:**

Many of the core human dimensions research questions are spatial in nature: Where are the people most vulnerable to environmental changes located? What are the impacts of human activities in the coastal zone, or mountainous areas, or drylands? How are land use and land cover changing and where? How is consumption of resources in urban areas or developed countries linked to environmental processes in areas of resource extraction? How do global environmental changes (e.g. climate change) affect people, ecosystems or production systems in a given location? This list of questions could go on, but it is sufficient to illustrate the spatial dimensions of the HD research agenda.

The purpose of this workshop is to provide researchers (particularly young and/or developing country researchers) with training in cutting edge approaches for spatial data integration and analysis. The workshop requires prior understanding of GIS and statistical analysis. Candidates must already know how to carry out basic spatial manipulations such as performing queries and creating buffers, and how to do basic regression analysis.

The first part of the workshop will focus on global data sets relevant to the human dimensions research community, with a particular focus on the construction and use of socioeconomic as well as ecological data sets such as the Gridded Population of the World, the urban extents database, and global malnutrition, infant mortality and global land cover data sets. Attention will also be paid to key biophysical and infrastructure data sets (e.g. climate, agricultural suitability, transportation, distance to ports, land use and land cover, digital elevation information and other data sets) for analytical and data integration purposes. Participants will learn about:

- how the socioeconomic data sets were constructed
- how the land cover information were derived from remote sensing data
- data evaluation (picking the right data for a given research question)
- methods for conducting analyses of these data sets to identify patterns and possible causal relationships
- construction of new variables from existing data sets
- importing data into statistical software and some special features for dealing with spatial autocorrelation and use of Geoda, a freeware spatial statistics software

The second part of the workshop will focus more on local-level applications (particularly in Africa). It will address global data availability versus local needs and data needs for an integrated modeling framework. Participants will learn about:

- which global data sets are available, accessible and appropriate for local applications
- major data gaps and at different spatial scales
- producing one's own spatial data sets
- integration of global data sets into regional or local studies/GIS/models
- data accuracy and model sensitivity

Whereas the first two questions provide a theoretical introduction, the last three provide the framework for practical training (e.g. geostatistics and integrated modelling).

### **Practical aspects of the workshop:**

This training seminar provided hands-on technology tools training for the analysis of spatial data. The seminar focused on the use of geographic information systems (GIS), remote sensing and statistical software with training on ArcMap, Erdas and GeoDa respectively. It was particularly useful to cite examples from developing countries concentrating on global, regional (Africa) and local (Benin) scales of analysis. Topics addressed during the seminar included cartographic representation & modeling, land use & land cover change (LUCC), and spatial correlation analysis.

This seminar proved to be a very useful (and quite unusual) integrated training on several techniques that are usually approached separately. Furthermore, the discussion of research problems in a multidisciplinary audience gave the chance to understand and solve problems with a variety of perspectives.

The first part of the seminar focused on global data sets and the deconstruction of those explaining the way in which these were developed, the way in which selected variables answer a particular research question, variables development, etc. The second part focused on regional and local study cases in Africa (the whole continent and Benin). For the second part the need to understand what variables from a global dataset would answer questions

at the local level, and what techniques were more suitable for this type of analysis.

This seminar was conducted through the collaboration of several institutions where each one of them provided a particular focus of expertise. Thus the trainers managed to cover two main but quite different topics in the realm of spatial data for human dimensions research, i.e. spatial statistics and Remote sensing and Land use land cover change (LUCC). The institutions involved on this training seminar were the Center for International Earth Science Information Network (CIESIN) and the Population-Environment Research Network (PERN) at Columbia University, and the Center for Remote Sensing of Land Surfaces, University of Bonn.

#### **4) Training Seminar on Economic Methods for Global Environmental Change Research**

**Trainer:** Gernot Klepper, Institute for World Economics, Kiel/Germany

**Co-Trainers:** Sonja Peterson and Manfred Wiebelt, Institute for World Economics, Kiel, Germany.

##### **Scientific Concept**

This course informs about methods for analysing global environmental problems. The course covers four main areas:

- Theory
- Modelling Approaches
- Data
- Policy Analysis

The theory of global environmental problems introduces the major factors that result in their occurrence, it identifies the sources of market failure, and it derives theoretical solutions to these problems. The section on modelling approaches presents different empirical methods for analysing and assessing global environmental problems, e.g. computable general equilibrium (CGE) models, microsimulation studies, and others. A major challenge for analysing global environmental problems is data availability. Existing data sources and their uses will be presented. Finally, an introduction will be given to the range of policy instruments that are available for controlling global environmental problems.

##### **Practical aspects of the workshop:**

In the training seminar about “Economic methods for global environmental change research” the students received a big picture about the most common methods for

modeling economic aspects from regional to worldwide scales. Particular lectures were about different approaches to modeling economic process in relation to environmental change and political scenarios. Different methods were shown in theory and examples, included the general equilibrium model (GEM) and partial models. In addition data requirements to build economic models were discussed and the social accounting matrix (SAM) method was presented. Each student presented personal experiences and research problems and all participants together with professors, evaluated alternative approaches for specific problems in an interactive session. Problems presented for students included deforestation by soybean expansion, fishery and fish population fluctuation in relationship to climate change, individual decisions in different economic contexts, and sector impacts in relationship to climate change or policies. Different economic models under use were presented, including one general equilibrium model for Cameroon to evaluate different scenarios in relationship to deforestation and political decisions. All the participants received general information and orientation to start their own work about economics in relationship to each particular topic.

### 3.0 APN-Funded Participants

The following participants were funded with APN funds to attend the training seminars. Full contact details are included in the appendix. Abstracts with their feedback will be sent in a separate document.

ID	Gender	Last name	First name	nationality	residence	Reque st_type	Funding_source	Workshop title
148	Mr	anshari	gusti	Indonesia	INDONESIA	FS	APN CAPaBLE	Vulnerability
660	Mr	Chaudhari	kalpana	Indian	India	FS	APN CAPaBLE	Urbanization
1416	Mr	Chrisandini	Chrisandini	Indonesia	Indonesia	FS	APN CAPaBLE	Urbanization
1099	Mr	Coroza	Oliver	Filipino	Philippines	FS	APN CAPaBLE	Data
1678	Mr	Hoang	Kim Dzung	Vietnamese	Vietnam	FS	APN CAPaBLE	Vulnerability
1531	Mr	Jinhui	Zhang	Chinese	China	FS	APN CAPaBLE	Urbanization
598	Mr	Khrutmuang	Supaporn	Thai	Thailand	FS	APN CAPaBLE	Vulnerability
640	Mrs	Dewayany	Sutrisno	Indonesia	Indonesia	FS	APN CAPaBLE	Economics
854	Mr	Patnaik	Unmesh	Indian	India	FS	APN CAPaBLE	Data
597	Mr	Rasul	Golam	Bangladeshi	Nepal	FS	APN CAPaBLE	Economics
872	Mrs	Sahu	Susmita	Indian	India	FS	APN CAPaBLE	Vulnerability
202	Mr	Vo	Thanh	Vietnamese	USA	FS	APN CAPaBLE	Vulnerability
1194	Mrs	Wadud	Zia	Bangladesh	United Kingdom	FS	APN CAPaBLE	Economics
	Mr	Wu	Peilin	China	China	FS	APN CAPaBLE	
412	Mrs	Yashina	Tatjana	Russian	Russian Federation	FS	APN CAPaBLE	Data
936	Mr	Rhaman	Aminur	Bangladeshi	Bangladesh	FS	APN CAPaBLE	Principle Investigator

## **4.0 Conclusions**

All in all, the training seminar were a great success and helped formed many new as well as revitalize old networks among the participants and the trainers- in particular also within the context of the Open Meeting itself.

## **References**

## **Appendix**

Conferences/Symposia/Workshops



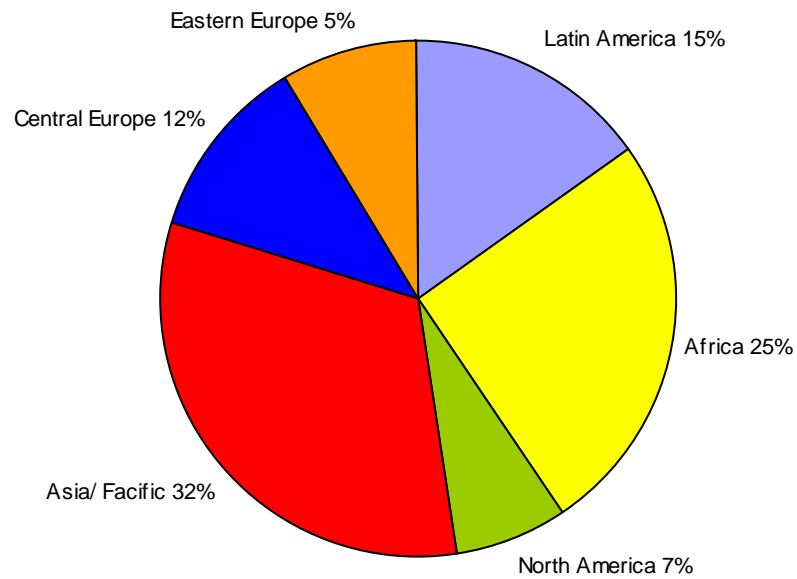
**Appendix I: Agenda/Programme (including title, date and venue)**

**Structure of Training Seminars on Methodological Issues Related to the Human Dimensions of Global Environmental Change**

**6-8 October 2005  
Arbeitnehmer-Zentrum Königswinter (AZK)  
Königswinter, Germany**

	Wednesday, October 5	Thursday, October 6	Friday, October 7	Saturday, October 8	Sunday, October 9
8:30 – 10:30		Introduction to Training Seminars (with all training seminar and Packard Institute participants)	Parallel Training Seminars and START/ Packard Institute	Parallel Training Seminars and START / Packard Institute	Open-Space Conference for Young Human Dimensions Researchers (organized by YHDRN*)
10:30- 11:00		<i>Refreshment Break</i>	<i>Refreshment Break</i>	<i>Refreshment Break</i>	<i>Refreshment Break</i>
11:00- 12:30		Parallel Training Seminars and START / Packard Institute	Parallel Training Seminars and START / Packard Institute	Parallel Training Seminars and START / Packard Institute	Open-Space Conference for Young Human Dimensions Researchers (organized by YHDRN*)
12:30- 14:00		<i>Lunch</i>	<i>Lunch</i>	<i>Lunch</i>	<i>Lunch</i>
14:00- 15:30		Parallel Training Seminars and START / Packard Institute	Parallel Training Seminars and START / Packard Institute	Parallel Training Seminars and START / Packard Institute	Social event for training seminar participants
15:30- 16:00	<b>Arrival of Participants and Instructors</b>	<i>Refreshment Break</i>	<i>Refreshment Break</i>	<i>Refreshment Break</i>	
16:00- 18:30		Parallel Training Seminars and START / Packard Institute	Parallel Training Seminars and START / Packard Institute	Parallel Training Seminars and START / Packard Institute	17.30: <b>Start of 6<sup>th</sup> Open Meeting</b>
19:00- 21:00		<i>Dinner</i>	<i>Dinner</i>	<i>Dinner</i>	

**Appendix II:** *Distribution of Participants.* Note: the attached contact list has all participants from the Asia-Pacific region highlighted in yellow. In total, this region represented with 32% the largest number of participants (see below diagram). However, not all Asian-Pacific participants required funding from APN as one was a guest of UNU and at least one other paid for themselves to attend.



**Appendix III: Funding sources outside the APN**

A list of agencies, institutions, organisations (governmental, inter-governmental and/or non-governmental), that provided any in-kind support or co-funding and the amount(s) awarded.

Funding source	Amount	Contribution
DFG (German Research Foundation)	\$1,000	Participants from developing countries
BMBF (German Ministry for Research and Education)	\$3,000	Participants from developing countries
APN CAPaBLE	\$45,000	Participants from Asian-Pacific countries
IHDP	in-kind	Organizational tasks, logistics, travel
GWSP (Global Water System Project)	\$2,000	Participants with a water focus
Inter-American Institute for Global Change Research (IAI)	\$6,000	Participants from Latin American countries
IIASA	\$3,000	Participants from IIASA membership countries (Egypt, South Africa, China, etc.
Norwegian Research Council	\$2,000	Female participants from Africa
The "International Encounters" Foundation at the Cologne/ Bonn Savings Bank	\$19,000	Participants from developing countries and trainers
Center for International Earth Science Information Network (CIESIN)	in-kind	Trainers and technical support
United Nations University (UNU)	\$3,000	Participants from developing countries and trainers