



- Making a Difference -
Scientific Capacity Building & Enhancement for Sustainable Development in Developing Countries

**“Social Challenges of Global
Change”: the 7th International
Science Conference on the
Human Dimensions of Global
Change (IHDP Open Meeting
2009); Bonn, Germany, 26 –
30 April 2009**

**Final Report for APN CAPaBLE Project:
CBA2008-07NSY-Schmidt**

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International Science
Conference on the Human Dimensions of
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Final Report submitted to APN

Overview of project work and outcomes

Non-technical Summary

The 7th International Science Conference on the Human Dimensions of Global Change "Social Challenges of Global Change" (IHDP Open Meeting 2009) took place in Bonn, Germany. From 26-30 April 2009, 938 participants from 85 countries attended the conference. Four plenary sessions with high level keynote speakers convened in the morning of each day and participants interacted in 91 parallel sessions with 395 presentations. In addition, 25 special sessions and events were held, ranging from a special session on resilience research convened by one of IHDP's National Committees, to a public round table with UN Ambassadors from the Small Island States addressing challenges of adaptive governance. The 2009 conference was the first Open Meeting under the guidance of the IHDP Strategic Plan 2007-2015 and it covered all three pillars of the plan: science, capacity building and science-policy interactions. In scientific terms, the IHDP Open Meeting 2009 was the first conference where both IHDP synthesis processes of its core research projects, as well as new IHDP initiatives, were launched successfully.

Thanks to the support of IHDP's projects and leading scientists, as well as the financial sponsors of the conference, capacity development was also a central part of the IHDP Open Meeting 2009. 80 highly qualified young researchers from developing countries were selected for a stipend to allow their attendance and several follow-up seminars to the latest IHDW series, Delhi, India, October 2008. The fact that 50 percent of the Open Meeting participants were 40 years or younger reflects both the nature of the IHDP network and the success of its capacity building efforts over the past years.

Finally, the IHDP Open Meeting 2009 broke new ground concerning science-policy interaction, with scientists confronted by the views and needs of practitioners and vice versa at the level of both the plenaries and special sessions. An exciting and well populated exhibition area around the main plenary hall provided the perfect platform to meet, discuss and plan new collaboration efforts. In addition, 5 public events were held back-to-back with the IHDP Open Meeting 2009 that focused both on users demands and invited the general public to attend and interact with the community of human dimensions scholars.

Objectives of the IHDP Open Meeting 2009 as put forward in the Original Proposal

The aims of the IHDP Open Meeting 2009 were:

- Strengthening the Human Dimensions research community;
- Fostering regional collaboration;
- Fostering scientific exchange through promoting greater interaction among researchers from developed and developing countries, with opportunities for transnational networks to facilitate problem-oriented, cross-disciplinary research relevant to global change;
- Promoting interdisciplinary approaches to Human Dimension research questions;
- Capacity building through a mix of senior and junior scholars;
- Linking with social science communities in order to capture and include current issues within mainstream social sciences (including humanities and economics);
- Linking the human dimensions research community in a realistic and targeted way with policy makers;

- Making the achievements of human dimensions research more visible, and increasing relevance to policy-makers; and
- Looking at the Open Meeting as being a component of a larger process to strengthen the human dimensions perspective on global change.

Amount Received and Number of Years Supported

The Grant awarded to this project was: US\$ 25,000 for the term from 23 February 2009 until 22 February 2010.

Work Undertaken

A highly selective, double-blind process of abstract vetting and selection was conducted between November 2007 and December 2008. Two calls were released with more than 1,200 submissions received.

For the implementation of the IHDP Open Meeting 2009 the IHDP Secretariat set up an internal Open Meeting Task Force headed by the IHDP Academic Officer for Science Management, Falk Schmidt. The regular Secretariat staff was supported by temporal project staff (assistants and interns), hired exclusively for the purpose of OM team support. The IHDP Secretariat provided back-up and in-kind staffing contributions for all logistics, fundraising, oversight of the selection process, as well as the communication with participants and partners of the conference.

An International Scientific Planning Committee (ISPC – see the attached list below) set the scientific agenda, foci and criteria and selected abstracts, as well as assisted in approaching high-level plenary speakers and panellists, and further assisted, where possible, in approaching funders.

Results

The title “Social Challenges of Global Change” reflected a concerted effort to further broaden the scope of the human dimensions research agenda. It went beyond the purely environmental domain and addressed other global change processes that are either affected by global environmental change or contributing to it. One result is the inclusion of work jointly addressed with the development research community e.g. in the realm of sustainable adaptation, a strategic move for research on global environmental change in general. Concrete activities included the START African Climate Change Fellowship Program (ACCFP); the public roundtable on challenges of social equity and cohesion, as well as the public roundtable on the specific needs of Small Island Development States concerning climate change adaptation, offering several entry points and links for this important area of research.

The four days of the conference provided the participants with a variety of formats and opportunities for intense debates. The scientific agenda set by the International Scientific Planning Committee structured the conference according to four major “Social Challenges of Global Change”. It was a concerted effort to address the broad scope of the human dimensions of global environmental change research agenda that exceeds the “purely” environmental domain. It was intended to define these challenges in a way so that they both add to and complement existing IHDP research. These four challenges were as follows:

- Demographic Challenges
- Resources and Technological Innovation
- Social Equity, Cohesion, and Sustainable Adaptation
- Adaptive Institutions and Governance

The presentation of IHDP’s core and joint projects was a crucial part of the conference. Their sessions represented true highlights of the IHDP Open Meeting

2009. Both the Global Environmental Change and Human Security (GECHS) and Industrial Transformation (IT) projects ran several sessions presenting their research findings, as both projects will come to a close in the next couple of months. The projects provided enough time and space, using the presence of the international community at the conference, to explore ideas for future research directions. Established projects such as the Global Land Project (GLP), Urbanization and Global Environmental Change (UGEC) or the project on Land Ocean Interactions in the Coastal Zone (LOICZ) successfully presented their current research portfolio in several sessions to the global community. New initiatives such as the Earth System Governance Project (ESG), Integrated Risk Governance (IRG-Project) and, in a somewhat less advanced stage, Knowledge, Learning and Societal Change (KLSC) used the opportunity to kick-start their activities and to reach out to the large audience present at the IHDP Open Meeting 2009. Additionally, the Integrated History and Future of People on Earth (IHOPE) initiative, developed together with partners from IGBP, was presented at the Open Meeting.

Among the parallel sessions, contributions from ESSP partners; IHDP national committees; well-known research institutes; official "partners of the conference"; and many more, enhanced scientific quality and facilitated a broad but focused scope of the scientific agenda of the conference.

As said above, this 7th conference of the Open Meeting series addressed the other two strategic pillars of IHDP's work: capacity development and science-policy interaction. In fact, one of IHDP's major strategic goals since its beginning has been to build capacity in the human dimensions of global change research worldwide. Therefore the attendance of more than 80 scholars, who were supported by the funds raised, was an outstanding success in its own right. These scholars presented their research both in the parallel sessions, as well as within special events that integrated a distinct capacity and network building component in the IHDP Open Meeting 2009, for example, as a follow up to the IHDW seminars held last October in New Delhi. Another component of this was a meeting of IHDP's National Committees during the days of the conference. Representatives of various committees discussed their needs and possible ways of improving their contributions to the global programme, and vice versa. Among other functions, these committees are crucially important for IHDP's work in developing capacity in human dimensions research. Given the great demand for human dimensions research these days and the opportunities stemming from being a UN conference at the UN Campus in Bonn, the IHDP Open Meeting 2009 consciously reached out to policy makers and practitioners by discussing, for example, the challenges for "Science for the 21st Century" – one of the special round tables of the conference and truly one of its highlights. Altogether, 5 public events were held, inviting the general public to attend and interact with human dimensions scholars. About 30 official representatives to the UN from the Alliance of Small Island States (AOSIS) joined the conference for a full day, looking particularly into options for sustainable adaptation.

Relevance to the APN CAPaBLE Programme and its Objectives

Over the past 14 years, the Open Meeting has established itself as a successful venue for presentation of results by established and up-and-coming scientists from all over the world, providing key networking opportunities. As the main IHDP activity and vehicle for transmission of scientific results, it also targets young scientists, mostly from developing countries. IHDP has demonstrated its ability in carrying out such events and has created a path for a long-term and sustainable investment in order to broaden its network and particularly to reach out to scientists from the developing world. As in past years, the IHDP Open Meeting 2009 brought together researchers from various scientific disciplines and backgrounds. This combined opportunity for training, as well as the immediate ability to present work and discuss with a thousand eminent and established researchers and policy makers, provided an invaluable added value to the capacity-building activities. As such, both activities

relate to all three of APN's criteria for CAPaBLE proposals: scientific capacity development, science-policy interfacing, and awareness raising for the Asia-Pacific region. As many examples have shown, IHDP "scholars", supported by its partners such as APN, have been able to occupy key positions within the network in the past years, which range from lead authors of global assessments, such as the IPCC, to Scientific Steering Committees of IHDP's projects, to keynote speakers at the IHDP Open Meeting 2009.

Self Evaluation

The feedback on the conference has been very positive and encouraging, illustrating that such conferences are major but worthwhile investments. The convening of such meetings as global platforms for exchange has been and will continue to be a major contribution of IHDP and its Secretariat to the human dimensions community.

As a milestone event, Open Meetings facilitate project implementation while providing outreach and fostering cross-project collaboration, for example, by developing a joint panel of two or more projects for presentation at the Open Meetings.

More than a dozen official governance meetings were held back-to-back with the IHDP Open Meeting 2009. These included project Scientific Steering Committee meetings, the IHDP Scientific Committee meeting, planning and task force meetings, aside from a multitude of bilateral meetings with varied purposes. This contributed to a high cost-efficiency not only for the conference, but for the wider purposes of the Programme and helped reduce the carbon footprint of the IHDP community, something IHDP strived for with its "Greening of the Open Meeting Initiative", which was well received by the participants.

In order to improve our future performance, we invited participants to evaluate the Open Meeting during the conference. A total of 131 participants returned the completed evaluation forms. The general grade for the meeting was 2.46 ("good"), with 1 being the best score and 5 the worst. The best scores went to the "selection of scientific issues" (2.08) and the networking possibilities (2.14). The opportunities for networking seemed to have been very good, with an aggregated mark of 2.14 and "good" support rate of 43.5% and "excellent" 23.66%. Regarding the scientific quality of sessions, posters and plenary sessions, the scientific level was rated with aggregated scores of 2.41. The plenary sessions received an aggregated score of 2.35 (average good).

Potential for Further Work

Open Meeting participants receive IHDP's regular electronic newsletter (E-Zine) and other news postings. Since the Open Meeting presents, more often than not, the beginning of long-term collaborations between participants, the potential for further work is immense. IHDP's established projects are a very good vehicle to involve Open Meeting participants in human dimensions research and to jointly investigate the social challenges of global change.

Publications

IHDP Update Magazine Issue No. 1/2009: "Social Challenges of Global Change", Bonn, March 2009.

Internet has been used to promote and disseminate the outcomes of the IHDP Open Meeting 2009 at: www.openmeeting2009.org. Rich multi-media-content is available next to abstracts, full papers and reports.

IHDP was able to produce professionally edited videos of key events of the Open Meeting, which are currently made available to worldwide audiences via Youtube at:

<http://www.youtube.com/user/IHDPSecretariat>.

IHDP Open Meeting 2009 Report

http://www.openmeeting2009.org/pdf_files/OM_Report_web.pdf

Conference Book

http://www.openmeeting2009.org/pdf_files/Conf%20Book_WEB.pdf

Other publications of direct relevance to or supported by the 7th OM:

UGEC Viewpoints No. 2, September 2009 "Urbanization: a Critical Human Dimension of Global Environmental Change"

<http://www.ugec.org/docs/UGECViewpointsIssue2.pdf>

LOICZ Reports and Studies No. 34 related to issues addressed at the LOICZ OM session: "The Analysis of Governance Responses to Ecosystem Change"

http://www.loicz.org/imperia/md/content/loicz/print/rsreports/34_the_analysis_of_governance_responses_to_ecosystem_change.pdf

GECHS sessions at the OM contributed to the GECHS synthesis and its synthesis conference of June 2009: IHDP UPDATE magazine 1/2009 "GECHS Synthesis. Human Security in an Era of Global Change"

<http://www.ihdp.unu.edu/file/IHDP+Updates/Update+2.2009+GECHS/Update+2.2009+GECHS?menu=61>

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Technical Report

Preface

The IHDP Open Meeting 2009 was the first one influenced by the IHDP Strategic Plan 2007-2015. It contributed successfully to the implementation of its pillars on cutting-edge science, capacity development and science-policy interaction. It provided the human dimensions research community with substantial food for thought, as well as many concrete research collaborations initiated during these days in Bonn. It clearly reasserted to the participants the importance of the human dimensions research agenda in times of rapid change and has motivated IHDP to implement this agenda. In 2009, the Open Meeting coincided with an unprecedented momentum for the social sciences and their expected contributions to a better understanding of the challenges of global change. As attention in science and policy is increasingly addressing and further understanding both the impacts of global change on the Earth System and the need to better understand possible response options and sustainability solutions, the social sciences can indeed offer significant contributions to these changes taking place. By shaping the conference agenda in the light of four major social challenges – demography, resources and technology, equity and sustainable adaptation, and institutions and governance – the conference provided the intellectual set-up for this important task.

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1. Introduction

The “Open Meetings” have, over the course of 14 years, established themselves as the major activity within the Human Dimensions of Global Environmental Change community to stimulate the exchange of information on research on a transnational and regional basis. Since 1995, they have been excellent vehicles to integrate researchers into the community who haven’t been involved before. The Open Meetings are a unique venue for meeting scholars from a wide range of disciplines, who are working in areas of common substantive interest. The conference helps to determine the state-of-the-art of human dimensions research, outlining new research agendas, theoretical frameworks and methodologies. Identifying cutting-edge research themes within the science-practice nexus, the Open Meeting also serves to promote the enhanced policy relevance of social science on global environmental change. A truly international and interdisciplinary group of 938 scientists, journalists, government officials, decision-makers as well as leading representatives from the private sector, various institutes, international organizations and NGOs attended the 7th Open Meeting at the UN Campus in Bonn, Germany from 26-30 April 2009. The conference has included creative ways to support and integrate younger scientists into the panels and roundtables and, in the longer-run, into established IHDP projects. In addition, together with a German partner, the Conference invited about 80 High-school students to attend the conference (partly) to encourage the “next generation” to join the debate. With 50% of its participants being 40 years old or younger, the conference represented an indication of IHDP’s success in this realm: to create a lively and highly motivated international community for human dimensions research.

The theme of the 7th Open Meeting of the International Human Dimensions of Global Environmental Change, “Social Challenges of Global Change,” responded to important changes in the perspective of the scientific community on the challenges that we are currently facing and outlined the new research agenda for IHDP’s second decade. The increased understanding of the challenges we are currently facing has shifted the focus in yet another way, from understanding the dynamics of global environmental change to using that understanding to devise ways to meet the

challenges that we see emerge. This has pushed the scientific community to pay more attention to the relationship between science and policy, to include more use-inspired and policy-relevant research, and to improve communication with government, business, NGO's and the civil society at large. These research trends invite us to move human beings and their societies from the periphery ("the human dimensions of global environmental change") to the center of our perspective on global environmental change, and to focus on societal dynamics as both the root of many environmental problems and the potential solution to them. But it is not argued here that this focus should become exclusive. The social challenges of global change will have to be addressed and led by scientists from all existing disciplines from social and natural sciences, working together in new ways to deal with a set of issues and challenges that transcends individual groups of disciplines. Ultimately, a coherent effort will be needed to address the emergent consequences of our continual modification of the global environmental systems.

Although the IHDP Open Meeting 2009 has, as usual, accorded an important place to "bottom-up" research, and provided ample opportunity to highlight the current activities of the IHDP community, the overall scientific framework of the meeting consisted of three components and made sure that the Social Challenges of Global Change have been addressed in a coherent manner: (1) four major social challenges as mentioned above and in more detail below, (2) specific issue areas, and (3) crosscutting themes. Particularly central parts of the 7th Open Meeting e.g. its plenary sessions and some of the other activities, structured the meeting in the light of this overall scientific framework.

(1) Four Major Social Challenges

Four major social challenges have been identified which are both paramount for the future living conditions of human beings and good entry points to demonstrate IHDP's preparedness to contribute to the new research perspectives described above.

1. How do we deal with demographic challenges?

The almost exponential increase of the world population in the last century is part and parcel of the global changes we are experiencing, but is generally hardly discussed as such. Yet the demographic explosion poses several major challenges. From an economic perspective (*"Who will pay for the increasingly expensive health care of growing societies and, in many parts of the world, aging population?"*), to that of food security (*"How many more people can we feed and at which level of food consumption?"*), to that of urbanization (*"How do we manage the growing number of cities with over 20 million inhabitants?"*), etc. The conference addressed such difficult questions as *"How real is the predicted reduction in population growth rate after the middle of this century?"*, *"What will its effect be on total consumption if, as is predicted, the reduction in population growth is mainly dependent on increase in per capita wealth (and consumption)?"*, *"What is the impact of improved health and increased aging?"*

2. How do we deal with limitations of resources and ecosystem services?

The relationship between society and its environment has thus far been the main emphasis of IHDP: resource depletion and replacement, reduction of consumption of energy, water and other resources, reduction of waste production, preservation of ecosystem services, etc. But we now need to include the core challenges to be overcome to avoid an environmental disaster of unequalled proportions. We need to ask such questions as: *"Can we achieve sustainability through technological innovation, or do we need to make more profound changes?"*, *"How do we transform the economic basis of our society into a sustainable one?"*, or *"How do we promote a different cultural and social attitude to the environment in general?"* In order to answer this new generation of questions in the realm that explores society-

environment relationships, we need to place the social sciences in the drivers' seat, as well as improve environmental communication and education. The work of IHDP-IT on large-scale shifts in socio-technological regimes played a special role on Day 2 of the conference, an IHDP core project currently in its synthesis stage.

3. How do we establish social cohesion while increasing equity at various levels?

Finding creative ways to ensure a fair and equitable distribution of the benefits and vulnerabilities associated with the social challenges of global change is pivotal. Some underlying principles of the world's societies are based on a strong notion of equity, while others are based on economic competition or kinds of inequities. Such fundamental cultural bases for social cohesion are difficult to change. Yet current processes that sharpen social contrasts within many societies, as well as between different parts of the world, will in the long run inevitably lead to increasing social tensions. Furthermore, as the risk of environmental challenges increases, we must find ways to transition to more social sustainability, based on a reduction of inequity and concomitant tensions. Thus, "*What are fair allocations of shrinking resources, increased costs e.g. for adaptation?*"; "*And how do we do that without jeopardizing current achievements?*" To include equity and justice issues in the conceptualization of the challenges and solutions of sustainability implies using the knowledge amassed by social scientists about social and cultural diversity, and about the material resources to support diverse human cultures and groups. The conference addressed these questions both in plenary and different parallel sessions, much of it shaped by questions on "sustainable adaptation options". Particularly the work of the GECHS project was highlighted in this respect.

4. How do we adapt institutions to address global change?

All questions above pose profound challenge to contemporary forms of governance. At some level, this challenge has been recognized in the effort to create indicators of sustainable development, quantitative measures that enable decision makers to factor in elements of sustainability into decisions that might otherwise have relied solely on economic criteria. New governance processes are required that can facilitate the inclusion of new kinds of information, new values, and new voices into decision-making. This, in return, requires new institutional settings and, prior to that, adaptability of current institutions. This realm has been a traditional domain of IHDP research and the launch of the new Earth System Governance project as well as presentation of the Integrated Risk Governance Project and the Knowledge, Learning, and Societal Change initiative were presented at the Conference.

(2) Specific Issue Areas

Key Issues such as water, land, food, climate change, coastal zones, institutions, technology or urbanization, have thus far been the focus of much of IHDP's activity, and they were of course presented at the IHDP Open Meeting 2009. However, we proposed to link them, where possible, to the four overarching challenges. Sessions convened on specific issues have, to a certain extent, gone beyond their specific themes and demonstrated their interconnectedness to one or more social challenges. When, for example, talking about the water crisis or urbanization processes at this Open Meeting, participants addressed questions such as "*How do we manage our water resources while facing, in many places, growing populations and generally increasing human demands?*"; "*What is the impact of uncontrolled urbanization on the social cohesion of societies and what kind of institutions are needed to avoid undesired social consequences?*"; or "*Is it power, interests, or perceptions that drive these changes?*".

(3) Crosscutting Themes

The crosscutting themes constituted the third, and last, component of the design of

the Open Meeting. By way of example, we have to point to four such themes that seem of increasing importance as highlighted by the conference.

An important change in our perspective is the growing awareness that in both social and environmental systems, change is not always gradual and in one direction, but may involve periods of rapid reconfiguration of systems. The structure, function and performance of these systems may come to be radically changed. Processes of non-linear change have been observed and modeled in bio-physical systems, and increasing attention is being paid to the problem of “sustainability transitions” through the interaction of governance and innovation. In the context of growing awareness about the unsustainability of many key production and consumption systems (energy, mobility and food) there is a vital need for improved understanding of whether and how sustainability transitions in coupled socio-ecological systems can be fostered, shaped and induced.

Socio-environmental change occurs simultaneously at many different levels, and is driven by complex processes that combine a wide range of temporal rhythms. Global warming will impact different regions of the globe differentially, and adaptation to it is therefore a regional affair. On the other hand, political decisions taken in one capital or another may impact individuals or groups in many other parts of the globe. Such cross-scalar connections are a major source of both stability and instability in complex socio-environmental systems and it remains a major challenge for the global environmental change research community to understand them properly, as well as to propose adaptive response options.

All societal dynamics relating to the environment involve the relationship between the observed and the perceived. These two do not always match very closely. Psychological, cultural and social factors influence perception and decision-making individually as well as in groups. They may also be a basis for mapping the environmental ethics of the group, as well as for a better understanding of how it will react to different kinds of social or environmental changes. Other, related issues have to do with how socio-environmental issues are communicated, and how people learn to perceive them. These are of capital importance in improving worldwide understanding of global change, its implications and its consequences. Hence, the conference presented work on such questions in different sessions, ranging from effective network governance to studies on cultural or ethical aspects of GEC.

The last crosscutting theme serving as a basis for the more than 100 parallel and special sessions of the conference here was the future of IHDP research itself. In this context, it was important to think about the ways in which current research structures (universities, funding agencies, research organizations, including IHDP and ESSP) shape present-day research, and what would need to be done to enable other kinds of investigations. The following questions we considered worth asking were proposed: *“Are the current research structures suitable for the kind of change in research that we are considering?”*, *“How could we improve trans-disciplinary interaction and fusion of ideas?”*, and *“The natural and life sciences speak a very different language than the social sciences and humanities – how do we facilitate their interactions?”*. This is also about new ways to conduct research and new methods and theories. In particular, there are issues surrounding our use of modelling that will need to be answered. On the one hand computer models, for example, are very useful tools to improve our understanding of the dynamics behind certain observed processes, as well as to promote integration of different disciplinary perspectives, but on the other, there are many questions that surround their use. Epistemological issues, issues concerning scenario building, and questions how to integrate lessons from the past into our understanding of the future are other exciting questions that have been addressed. A true highlight of the conference in this respect was the public roundtable on the “Role of Science in the 21st Century”, consisting of outstanding scholars of the IHDP community, who addressed these issues in a lively (and recorded) debate.

2. Methodology

1142 abstracts were submitted and reviewed for the IHDP Open Meeting 2009. Those accepted have been presented orally at one of the conferences numerous parallel sessions or as posters.

People from all over the world have submitted presentations for the IHDP Open Meeting 2009 under the four conference themes concerning demographic changes, limitations of resources and ecosystem services, establishing social cohesion while increasing equity at various levels and adapting institutions to address global change, all of which are of paramount importance to the future of human living conditions. The first call for submissions for the IHDP Open Meeting 2009 commenced in end of August 2007 was followed by the second call in September 2008, asking for submissions to specific areas in order to address remaining "gaps" of the submissions. Finally, the IHDP Open Meeting 2009 had 91 parallel sessions with 395 presentations and 25 poster presentations. Some 20 special sessions conducted by IHDP's partners and other organizations were held too. Delegates from more than 380 universities and research institutes all over the world also gathered at the IHDP Open Meeting 2009.

For the first call for papers, researchers were asked to submit session proposals and papers relating to the four social challenges identified as leading themes of the conference:

1. How do we deal with demographic challenges?
2. How do we deal with limitations of resources and ecosystem services?
3. How do we establish social cohesion while increasing equity at various levels?
4. How do we adapt institutions to address global change?

For the second call for papers and posters for the IHDP Open Meeting 2009, the following themes were identified.

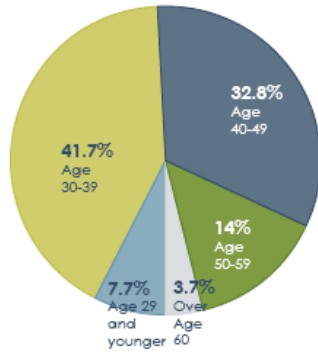
1. Human dimensions of climate change
2. Demographic challenges and resource management
3. Demographic trends, global change, and health care systems
4. Technology and innovation studies
5. Resource conflicts and cooperation
6. Limited resources: dominant discourses, guiding perceptions
7. Exploring the equity-participation nexus
8. Gender and global environmental change
9. Normative foundations and fair solutions in times of rapid change
10. Exploring the human behaviour-institutions nexus
11. Holistic governance approaches and policy integration
12. Economic instruments and market based solutions
13. Human dimensions research: new topics, new approaches
14. Knowledge, learning, and rapid change

3. Results & Discussion

938 participants came to Bonn for the IHDP Open Meeting 2009. With extremely varied backgrounds both geographically and professionally, the mix of researchers presenting at the IHDP Open Meeting 2009 created a motivating and rewarding dialogue. Participants from 85 countries shared their knowledge during the conference. Of those who provided relevant information, 43 percent were female, highlighting a fair gender distribution among the delegates.

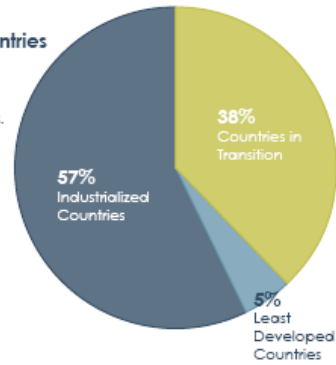
Age Groups of Participants

Based on accepted submissions from the first and second calls. (excluding 13% who did not provide their birthdate)



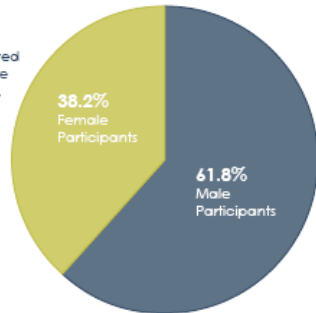
Developed and Developing Countries Represented

Based on accepted submissions from the first and second calls. Development status defined according to UN sources.



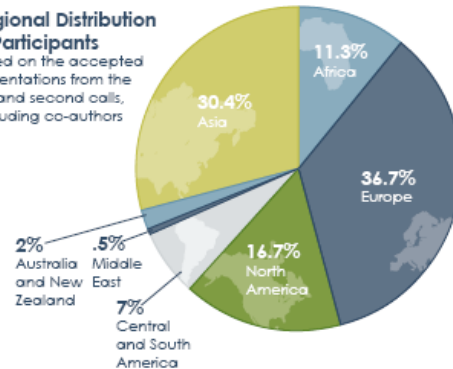
Gender Ratio of Participants

Based on the accepted presentations from the first and second calls, excluding co-authors



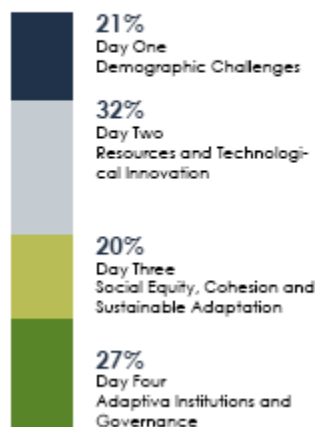
Regional Distribution of Participants

Based on the accepted presentations from the first and second calls, excluding co-authors



Parallel sessions are the core of the IHDP Open Meetings and the challenge for the organizer is to achieve a “good mix” thematically, to meet the highest standards and to implement the overarching scientific agenda of the conference, while providing sufficient space for participants to comment on the agenda by presenting their ongoing research. Hence, the work presented at the sessions represents the cutting-edge of current international human dimensions research. Presentations were well distributed topically between all four days of the conference, although the second day (on Resources and Technological Innovation) proved to be the busiest with a total of 130 presentations given in 28 different sessions.

Papers Presented per Day



So as to address the social challenges of global change in a comprehensive manner and to touch upon all three pillars of IHDP's work – cutting-edge science, capacity

development, and science-policy interaction – the IHDP Open Meeting 2009's overall framework consisted of various components including plenary sessions, special round tables, parallel scientific sessions, as well as follow-up training courses to the IHDW 2008. Side events and meetings, book and project launches, a generous exhibition area, as well as specialised formats addressing the science-policy interaction, complemented by 5 public roundtables in the evening of the first three days of the conference, have all complemented the scientific core of the conference. In order to present some of its findings in more detail, certain aspects of the conference that have addressed the overarching concept as a whole should be briefly presented.

Plenary Sessions

The IHDP Open Meeting 2009 attracted prominent representatives of scientific, political and social backgrounds as speakers to the event. The plenary sessions started each day of the conference with keynote speeches focusing and framing the day's theme and stimulating the discussions of the following special and parallel sessions.

Demographics

The challenge of demographics in a rapidly changing world was the main subject of the plenary session of the first day of the IHDP Open Meeting. Though demographic and social challenges are in many ways synonymous with human dimensions research, they have not yet been fully explored or placed at the centre of the global environmental change research agenda. Issues of demography interact with many special issue areas of global change such as health, urbanization, pollution and resource usage. Environmental change is expected to alter the availability of resources, such as the availability of freshwater, the productive capacity of soils and patterns of human settlement. We do not, however, know the extent and geographical distribution of these changes, nor can we know how environmental change may influence human societies and political systems. In terms of population growth, the almost exponential increase of the world population in the last century is part and parcel of the global changes we are experiencing, but is, generally, hardly discussed as such. Yet the demographic explosion poses several major challenges from a variety of perspectives: from an economic perspective (*"Who will pay for increasingly expensive health care of growing societies and, in many parts of the world, aging population?"*), from a perspective of food security (*"How many more people can we feed and at which level of food consumption?"*), from an urbanisation perspective (*"How do we manage the growing number of cities with over 20 million inhabitants?"*) as well as from perspectives encompassing forced migration, human security and poverty.

Lori Hunter, from the University of Colorado, Boulder, USA, chaired this plenary session, which focused on the interactions between global change and human health, urbanisation, pollution and resource usage. Keynote speakers included Wolfgang Lutz, from the International Institute for Applied Sciences in Austria, who stressed the importance of population forecasting, Flavia Pansieri, the Executive Coordinator of UN Volunteers, who emphasised the role of voluntary actions in the providing sustainable solutions to the greatest social challenges of global changes, and Xizhe Peng, the director of Fudan University, who spoke, for example, on the implications of changing population dynamics in China. Speakers addressed such difficult questions as *"How real is the predicted reduction in population growth rate after the middle of this century?"*, *"What will its effect be on total consumption if, as is predicted, the reduction in population growth is mainly dependent on increase in per capita wealth and consumption?"*, *"What is the impact of improved health and increased aging?"*, *"What are the internal social feedbacks that impact demography and vice-versa?"*, *"What influences and causes perceptions and belief systems on demographic challenges?"* and *"What is the nature of demographic change, its*

drivers and impacts?" Throughout that day, IHDP's affiliated Population and Environment Research Network (PERN) played an important role in highlighting its work.

Resources and Technological Innovation

Improving the quality of life and human wellbeing has historically been strongly linked to increasing resource consumption. Socio-technical innovation still focuses on increasing production and on efficiency gains, but not necessarily on sustainability, as efficiency gains are often counteracted by rebound effects. However, environmental change and increasing scarcity of both resources and ecosystem services can catalyse innovation towards radically different patterns of resource consumption. Can we achieve sustainability through technological innovation? Is it possible to identify an agenda for action necessary for the transition towards sustainability? How do we transform the economic basis of our society into a sustainable one? What role does the current economic crisis play in shaping a possible sustainability transition? These and other urgent questions were debated by international experts during the plenary session on "Resources and Technological Innovations" on the second day of the Open Meeting. Convenor Frans Berkhout (chair of the Industrial Transformations Project) opened the discussion by stating that technology is crucial to decoupling economic welfare from the imprint we leave on global systems. Ernst von Weizsäcker, member of the IHDP Scientific Committee, was optimistic, saying that we can increase resource productivity fivefold within the next 50 years. Richard Tol, from the Economic and Social Research Institute, Ireland, followed and entered a lively debate with von Weizsäcker by presenting his vision of the transition needed in the current energy system. Ortwin Renn, University of Stuttgart and Director, DIALOGIK, Germany, and Christopher Bunting, Secretary General of IRGC, Switzerland presented recent insights from work on risk governance and stressed the fact that risk governance is crucial in times of rapid change and must cover the physical, economic, and social dimensions.

Social Equity, Cohesion, and Sustainable Adaptation

"We come as ambassadors from the planet to alarm Western society that we need urgent action now," said Dessima Williams, Chair of the Alliance of Small Island States (AOSIS), during the plenary session on Social Equity, Cohesion and Adaptation, on the third day of the Open Meeting. Wolfgang Schmitt, Managing Director of the GTZ, emphasised the integration needed of scientifically based human security concepts into practice oriented project development. Robin Mearns of the World Bank Social Development Department argued that climate change was an issue of social justice, and he explained that both inequity and injustice are rising, especially in developing countries, and therefore, priorities at the international level must be reconsidered. Walter Ammann, chairman of the International Disaster Risk Reduction Center (IDRC) called for a redefinition of development goals, as climate change was not taken into account upon their initial definition. This day of the conference was particularly lively, influenced by the debate about sustainable and equitable adaptation measures for various (global) changes and it was concluded by a public roundtable on "Global Equity and Local Needs".

Adaptive Institutions and Governance

Jan Pronk of the Institute of Social Studies, The Netherlands, spoke on the role of the United Nations in environmental, socio-economic, and political sustainability. Laurence Tubiana, the director of the Institute of Sustainable Development and International Relations in France, asked if sovereignty is a major obstacle to address the challenges of global change or if a redefinition of sovereignty is necessary and impending. Oran Young, chair of the IHDP Scientific Committee, explained the incongruity that may arise when institutions increase adaptiveness, as well as accountability. Roberto Guimaraes, vice-chair of the IHDP Scientific Committee, asked "*We have been speaking to power for so long now, is power willing to listen?*" and elaborated on various aspects of science-policy interactions. Mark Fulton,

managing director of the Global Head of Climate Change Investment Research at Deutsche Asset Management, concluded that adaptation and mitigation are dependent on the private as well as the public sectors. As said above, IHDP has been a crucial player in contributing to the various debates about international environmental governance, now prominently addressed in the agenda for the Earth Summit 2012, Rio, Brazil.

Public Roundtables at the Open Meeting

Overall, five public roundtables of the IHDP Open Meeting 2009 gathered a talented set of panellists to engage the general public about the most pressing social challenges of our day. The round table, "Addressing the Social Challenges of Global Change – the Role of Science in the 21st Century", provided a platform for representatives of the human dimensions community and its partners to exchange views on the role of their science in effectively meeting the challenges of global change in the current century. The debate was lively and occurred just at the beginning of a new momentum for human dimensions research as specified, for example, by the ICSU Visioning Process. In the roundtable "Catastrophe Sells" panellists discussed the difficulties of reporting environmental news, concluding that so long as the facts remain clear, fresh reporting, sound bytes, and a touch of catastrophe may be just what are needed to get the message across. In the roundtable on e-Health and Telemedicine panellists presented and discussed the role of these important new technologies. United Nations Ambassadors from Small Island States joined in a panel on adaptive capacities of small island states against large-scale environmental change. The "Global Equity, Local Needs" roundtable covered the challenges and barriers related to equity on various levels. To include five such roundtables and to invite the interested public was a major success of the organizers of the conference and a distinct contribution of the IHDP to the science-society interaction. This effort was also appreciated and supported by the German Year of Science 2009, aiming at a better public understanding of contemporary science challenges. In some more detail:

Taking place after the IHDP Open Meeting 2009's first day of parallel sessions, the round table "Addressing the Social Challenges of Global Change – the Role of Science in the 21st Century" addressed the following questions: *How can the human dimensions community respond effectively to the raising demand for its science? What are the most promising areas for cutting-edge social science contributions to understanding global change? How should we organise the human dimensions community to maximise progress in this effort?* The Open Meeting was an apt occasion at which to discuss such pertinent questions in the form of a public debate. This round table initiated a reflection on the current role of human dimensions research. James Painter of BBC World Service and Reuters Institute for the Study of Journalism, Oxford, served as moderator for what turned out to be one of the best attended sessions of the conference. The panellists included Oran R. Young, University of California, Santa Barbara, and, IHDP Scientific Committee Chair; Katrina Brown, University of East-Anglia, UK; Carlo Jaeger, Potsdam Institute for Climate Impact Research, Germany and IHDP Scientific Committee Member; Roger Kaspersen, Research Professor, Clark University, USA; Nicole Dewandre, EU Commission, DG Research, Belgium; Xuemei Bai, CSIRO Sustainable Ecosystems, Australia; James L. Buizer, Arizona State University, USA; Gernot Klepper, Kiel Institute of World Economics, Germany, and IHDP, Scientific Committee Member.

As the public's window to the world, the media must simplify complex matters without distorting meaning and stories must catch the public's attention while not succumbing to overt sensationalization. At the same time, highly important issues must be given their due coverage while not deafening the public with their frequency. Deutsche Welle supported the second roundtable "Catastrophe Sells" on the second day of the Open Meeting. The event focused on the difficulties the media faces in reporting environmental challenges. The panellists to this roundtable

moderated by Irene Quaile-Kersken, Head of Feature and Magazine Programming, Senior Editor and Host of Living Planet, Deutsche Welle World, Germany, were: Ortwin Renn, University of Stuttgart and Director of DIALOGIK, Germany; James Painter BBC World Service, UK, Reuters Institute, UK; Ranjitha Balasubramanyam, Deutsche Welle Radio, Germany; Walter Ammann, President, Global Risk Forum, Switzerland; Stefan Krug, Spokesman, Greenpeace, Germany; and Richard Klein, Climate Change Specialist, Stockholm Environment Institute (SEI), Sweden. These top scientists and journalists from all over the world tried to answer the following questions: *How can the media ensure the continued salience and urgency of a message that is ongoing in nature without resorting to sensationalism? How can positive societal change be both encouraged and reported while retaining public interest? What will it take to move away from a focus on what is happening to a focus on how we can change it? How can scientists make their results more easily understood and accessible to the media? How can the media, in turn, more accurately represent the science, which tends to progress in smaller increments as opposed to spectacular breakthroughs?*

Telemedicine is a rapidly developing application of clinical medicine in which medical information is transferred via telephone, the internet or other networks for the purpose of consulting and remote medical procedures or examinations. e-Health, on the other hand, is a relatively recent term for healthcare practice supported by electronic processes and communication. The roundtable "The role of e-Health and Telemedicine" sponsored by Lavadoo and Geomed, took place on the second day of the Open Meeting and focussed on these two innovative approaches to health care. International experts from a variety of fields: Björn Bergh, University of Heidelberg, Germany; Stefan F. Winter, CompuGroup Holding AG, Germany; and Uma Nath Varahabhotla, Emergency and Management Research Institute, India; provided insights as to the main trajectories of research and practice in this realm. Discussion was moderated by Mark Rosenberg, Co-Chair, ESSP-Global Environmental Change and Human Health; and Thomas Krafft, Chair, IHDP Global Change and Human Health Advisory Group. Telemedicine and e-Health are already components of baseline health care services and will continue as such into the future. In guaranteeing health care for all, telemedicine and e-health applications have a huge potential. In both the industrialized and developing world, both can play a significant role in the future of health services.

A combination of climate characteristics and particular socio-economic circumstances makes many small island states some of the world's most vulnerable to climate change. These countries, however, emit extremely low levels of greenhouse gases. While they hardly contribute to climate change, they disproportionately suffer the impacts of climate change through the rising sea-level, increased drought, loss of coral reefs due to bleaching, and freshwater scarcity resulting from decreased rainfall and salt water intrusion. A high level roundtable discussion on "Adaptive Governance: The Case of Small Island States" took place on the third day of the Open Meeting. The panel of UN Ambassadors from Small Island States explained under the moderation of Martin Parry, Centre for Environmental Policy, Imperial College London, UK, why Small Island states can be viewed as laboratories, providing significant insight into climate change impacts, vulnerability and adaptation options that can be shared with other countries less directly or severely affected by climate change. This roundtable was organized by the German Foreign Ministry and convened as part of the IHDP Open Meeting 2009 on special invitation.

Inequity, both among people and nations, is one of the greatest challenges of our times. The global environmental change agenda can only fully be understood if these social dimensions are part of the analysis. While global equity can be easily understood as a general norm or guideline that steers our actions towards greater sustainability, specific obstacles that have to be overcome case by case often arise in attempts to ensure equity. Yet we can only move towards sustainability if equity is

met at various levels. This round table took advantage of the presence of leading scientists and practitioners who strive for global equity. Each provided different case studies from their own experience, shedding light on the topic from different angles. In doing so, they made a strong case for the inclusion of equity questions into the global environmental change agenda.

New Initiatives and Projects Sessions

The newest of IHDP's projects and pilot projects are currently setting the long term research agendas in their respective fields. A special session at the IHDP Open Meeting presenting the new IHDP research activities, chaired by Oran R. Young, fleshed out how new projects emerge and how ideas and research challenges in the research community are being transformed into an initiative research project. Frank Biermann, Chair of the Earth System Governance Project (www.earthsystemgovernance.org) and Ruben Zondervan, Executive Officer, presented the analytical framework, the emerging global network, upcoming events and, last but not least, the recently printed Earth System Governance Science and Implementation Plan.

Carlo Jaeger, Co-chair of the Integrated Risk Governance pilot science project (www.irg-project.org), presented the conceptual ideas behind this project's Science Plan, currently under review prior to its formal approval by the IHDP Scientific Committee, as well as the dynamics of the planning process.

Ilan Chabay, Co-chair of the Scientific Planning Committee of the Knowledge, Learning and Societal Change for Sustainability initiative, described the challenges of concentrating the broad ideas behind this initiative into a focussed conceptual framework for the project's science plan, currently in an early drafting phase. These presentations were followed by a discussion between the presenters and the more than 100 audience members, which highlighted both "great breakthroughs" and "moments of despair" throughout the planning process of such global, long-term science projects. The discussion also emphasised that planning processes are never straightforward, often subject to complex dynamics, and a real, though rewarding, academic and managerial challenge. However, established projects of IHDP have clearly demonstrated their ability to produce cutting-edge science and their potential to frame the discourses globally.

IT and GECHS Synthesis

Two of IHDP's core projects, Industrial Transformation (IT) and Global Environmental Change and Human Security (GECHS), used the IHDP Open Meeting 2009 as a platform to present the synthesis of their 10 years of research. Focusing on sustainability transitions, IT presented its work in multiple, special and parallel sessions. In addition, a roundtable session on technological innovations brought together scientists interested in continuing research on industrial transformation to discuss new, relevant research topics, and to begin defining the way forward. With 12 sessions, and more than 60 scientific papers submitted, GECHS presented its current work in the field of human security, and discussed the evolution of thought on this topic. The GECHS sessions covered important aspects of the social challenges of global change, including how to approach threats to human security, emerging new vulnerabilities in megacities and its implications for human security, interactions between globalization and global environmental change and limits and barriers to climate change adaptation. Special focus was placed on identifying key research challenges for the future, in preparation for their synthesis conference that took place from 22-24 June 2009 in Oslo, Norway (www.iss.uio.no/gechs/).

Exhibition

Twenty-five sponsors, partners and supporters disseminated information to the

Conference's participants. Participants were able to visit leading institutions in the Global Change Campus, relax in the reading area of the Publisher's Corner, or explore the Open Meeting Marketplace in the Rhinelobby. Ministries, government agencies, non-governmental organisations, private companies, the media and national committees presented their vision for a sustainable future. IHDP institutional sponsors, science projects and endorsed research networks showcased their activities in a collective exhibition in the main lobby of the World Conference Center Bonn (WCCB).

White Sofa

More than 40 people visited the "White Sofa" in the "Rhinelobby" to voice their thoughts, ideas, and suggestions about the conference and the role of the human dimensions research to face global change. They were asked questions like: What is the biggest Social Challenge of Global Change? Or: do you see the role of human dimensions research in answering it? Thirty percent of the interviewees were members of IHDP projects, and fifty percent came from developing countries. Comments were largely encouraging and some of the people interviewed were so excited about the idea of sharing original points of view about the social challenges of global change that they requested to be interviewed more than once.

The opinions expressed included:

"I feel like this organisation really has the potential to bring together those diverse communities, but only by thinking of itself more broadly". Lori Hunter

"It is a very interesting crowd of people. I like the interdisciplinarity that is present at the meeting, it's quite different from [going to a topically specific] conference... I like the truly international character, and it's not only senior people coming, together, but you have students from all over the world as well." Wolfgang Lutz

"The interest of conferences like this is to bring the current line of thought on development issues back into the current thought in our countries." Humphrey Ngala Ndi

"I find it very interesting to hear what's happening in the social science community because I think it's hugely important, and often far too undervalued." John Ingram

Greening the IHDP Open Meeting 2009

Around 1000 participants from the worlds of science, policy, civil society and business gathered together during the IHDP Open Meeting 2009. The creation of this essential platform for the discussion of environmental changes is not without its own environmental costs. By their very nature, international meetings of this size induce massive amounts of greenhouse gas emissions, convert tons of material resources into waste, use large amounts of water and can result in many indirect forms of pollution to the air, water and soil. These environmental impacts are clearly and directly related to the core questions addressed by the IHDP Open Meeting 2009. Making meetings less resource intense, for example, is one very practical way to address the challenge of limited resources and ecosystem services. In this light, taking the IHDP Open Meeting 2009's environmental impacts into account and working to reduce them has become an imperative. The experience of trying to make the IHDP Open Meeting 2009 more sustainable, however, has also been an institutional challenge, entailing changes to established practices and working with both temporal and monetary constraints. In this regard, IHDP has strived to do what was possible given the limitations with the expectation that this initial effort will kick off a greener era in IHDP event planning and activities.

The largest environmental impact of the IHDP Open Meeting 2009 came in the form

of greenhouse gas emissions resulting from travel. On a local level, IHDP's provision of free metro and bus passes encouraged the use of public transportation throughout the conference period. To raise awareness about the greenhouse gas emissions resulting from air travel brought about by the Open Meeting and the Open Meeting's organization in general, IHDP partnered with CO2OL (www.CO2OL.de), a Bonn based carbon offsetter. In CO2OL's final calculation, the average participant's Open Meeting related carbon footprint equaled to some 2.68 tonnes of CO2 equivalents, with travel accounting for 97 percent of that total. With 938 participants, overall emissions from the preparations, travel, and the conference itself totaled 2,676 tonnes of CO2 equivalents.

IHDP recognizes that the type of face-to-face communication made possible by the IHDP Open Meeting 2009 is irreplaceable. However, IHDP worked hard to tackle the environmental impacts throughout the planning of the Open Meeting.

4. Conclusions

Goal 1: Strengthening the Human Dimensions research community

Result: The Open Meeting 2009 provided an unparalleled opportunity for the global environmental change research community and other concerned stakeholders to directly engage with one another on the social challenges associated with the global changes we are increasingly facing. The crucial role of the Open Meetings has been emerging back-to-back with the overall development of the international human dimensions community in general and IHDP in particular. All participants to the Conference have been exposed to and often pro-actively integrated into the larger IHDP community, added to community and project listservs and events in order to keep bonds that have been built in the face-to-face meeting. As the most important milestone event of the global community it provides the platform and galvanizing point for much of its research. Altogether, more than a dozen official IHDP governance meetings were held back-to-back with the Open Meeting 2009 (such as the IHDP Scientific Committee or project Scientific Steering Committees), to mention just one concrete aspect of community-building attached to the Open Meetings.

Goal 2: Fostering regional collaboration;

Result: During the Open Meeting participants had various possibilities for creation of regional and local cooperation. For example, thirty-one national representatives have discussed future enhancement of interaction with each other during a special session for IHDP National Committees. Few suggestions raised at the meeting have already been implemented (e.g. Electronic Bulletin) and others are a subject of consultations with members of IHDP Scientific Committee planned to be finalised within few months. A further example of how the Open Meeting 2009 fostered regional cooperation may be a special session on Global Change governance issues in the Americas, at which the ongoing discussion on a joint initiative of the Inter American Institute, IHDP and the Earth System Governance Project has been initiated. Due to its partners such as APN or IAI, a distinct "regional component" is attached to the meeting, ensuring that the international conference presents itself a multi-level and multi-regional view on the various aspects of GEC. The participation of attendees from 85 countries provides a very impressive score for and international science conference too.

Goal 3: Fostering scientific exchange through promoting greater interaction among researchers from developed and developing countries, with opportunities for transnational networks to facilitate problem-oriented, cross-disciplinary research relevant to global change;

Goal 4: Promoting interdisciplinary approaches to Human Dimension research questions;

Goal 5: Capacity building through a mix of senior and junior scholars;

Result for 3 & 4 & 5: The Open Meeting 2009 served as an important meeting place and exchange of ideas between established researchers and up-and-coming researchers – both from developing and developed countries. With nearly 1,000 participants from 85 countries, it was the largest international conference of its kind on social issues of global change, and placed a large emphasis on enabling the participation of younger and developing country researchers, as well as making strategic partnerships with other organizations not necessarily already in IHDP's established networks. The very nature of a Programme like IHDP with its international long-term research projects is to answer explicitly to the challenge put forward in Goal 3.

The body of participants was dominated by scientists from 31 to 40 years of age, with scientists from 41 to 50 years of age making up the second largest group present, and more than 16 percent of the participants were students of academic levels (Bachelor, Master, PhD). These numbers show that the 7th International Science conference on the Human Dimensions of Global Environmental Change succeeded in attracting both the young and the experienced, so as to best provoke global discourses on the social challenges of global change.

A great number of researchers who presented their research, 11.5 percent in all, received stipends that largely secured their participation costs. Thanks to the financial support provided by various donors, IHDP was able to provide about 80 stipends. This was a major contributing factor to the conference's remarkable presence of participants from developing countries. To get support from donors such as APN is pivotal in achieving this goal and to enable highly talented younger researchers, selected by leading scholars of human dimensions research, to attend such a conference and to become part the community. These days, many project SSC members, lead authors of international assessments, such as IPCC and other important international scientific endeavours, started their career as a stipend either to one of IHDP's IHDWs or to a project Open Science Conference or the Open Meeting itself.

Goal 6: Linking with social science communities in order to capture and include current issues within mainstream social sciences (including humanities and economics);

Result for 4 & 6: Again, this addresses the very nature of IHDP and its projects and the report presents a multitude of examples as to how this was achieved. The synthesis and agenda-setting function in addition to the presentation of and feedback on ongoing work is key for progress in the advancement of our understanding of human dimensions of GEC.

Goal 7: Linking the human dimensions research community in a more realistic and targeted way with policy makers;

Goal 8: Making the achievements of human dimensions research more visible, and increasing relevance to policy-makers;

Result for 7 & 8: The Open Meeting, as in past years, served not only to highlight the IHDP community's contributions to international processes such as the IPCC and MEA in special sessions and discussions, but also to showcase the science-policy dialogue at a significant level through special plenary sessions and roundtables. With its status of being an official UN Conference, IHDP was able to attract several Ministries from the host nation, Germany, and beyond, UN partner agencies and

individual persons with a political but also business background who served, for example, as keynote speakers at the conference.

The science-policy interaction is a top priority for IHDP in its second decade. The IHDP Open Meeting 2009, building upon experiences already gathered during the previous meeting in 2005, welcomed numerous actors from both spheres and presented an attractive and well-used platform for dialogue and interaction. In a conscious choice the open science conference was designed to provide science-policy links and provide a perspective for further collaboration. This was met with strong interest from political communities and will be continued in the future. Ranging from the attendance of more than 30 official representatives to the UN, NYC, from the Alliance of Small Island States (AOSIS), to the public roundtable, to the involvement of about 80 High-school students, with its 7th conference, the IHDP has truly addressed the interface of science and policy as well as science and society.

Goal 9: Looking at the Open Meeting as being a component of a larger process to strengthen the human dimensions perspective on global change;

The IHDP Secretariat is convinced that a strong organizer and a well-coordinated and thought-through scientific agenda are paramount for the success of the Open Meetings. Having said that, this conference series is indeed the Open Meeting of the whole human dimensions research community, providing the stage for IHDP's partners and future collaborators. Be it the overarching goal of the IHDP Strategic Plan 2007-2015 or the current momentum for social sciences raised by the ICSU visioning context, our better understanding of human impacts on and responses to GEC phenomena will depend on the input from a broad range of social science initiatives. After 14 years of existence, IHDP is well-positioned to play a crucial role in meeting this challenge.

5. Future Directions

The Open Meeting 2009 has provided a rich input to the IHDP agenda for the incoming months and years. The conference has resulted in numerous new initiatives and developments in all three pillars of IHDP's activities: Cutting-Edge Science, Capacity Development and Science-Policy Interaction. As said above, a direct follow-up took place in June 2009 during the GECHS synthesis conference, later in 2009, the Amsterdam Conference on Earth System Governance was convened and in 2010, the IT synthesis event "Experiments, system innovation and sustainability transitions in Asia", also supported by APN, builds upon sessions of this conference. Planning activities of the Knowledge, Learning, and Societal Change initiative and many more meetings were and are directly benefiting from the outcomes of the IHDP Open Meeting 2009. A major outreach activity for the human dimensions of GEC was done by the Secretariat at the First World Social Science Forum, May 2009, Bergen, Norway, organized by IHDP's institutional sponsor the International Social Science Council (ISSC). This provided IHDP a great opportunity to present its work to the social science community and to attract greater interest from projects and initiatives not yet connected to IHDP. A special session with ESSP and the German National Committee, as well as an exhibition booth, was used for this purpose.

Cutting-Edge Science

The most urgent research questions asked by the political community relate, for example, to Adaptation and Responses to large-scale environmental changes. Building on the work being done under Vulnerability, Adaptation and Resilience, as well as on a corresponding agenda in the context of the Human Security project (GECHS), a particularly important research field is getting into the centre of IHDP's work and attention.

IHDP new projects (ESG) and initiatives (IRG, KLSC) have strengthened their position within the human dimensions research community and initiated new interdisciplinary partnerships and cooperations that will strongly affect in a positive manner their scientific development and relevance.

Overall, IHDP is simultaneously pursuing a further strengthening of the social sciences in GEC research on the one side, including outreach activities to communities and discourses so far not well represented in GEC research, such as philosophy or cognitive sciences. On the other side, it further continues the integration of its activities with natural science colleagues. Its portfolio of joint projects run with IGBP and under the ESSP provide many success stories in this respect such as the current collaboration between the Global Carbon Project (GCP) and the Earth System Governance project (ESG) that was just submitted to APN under CAPaBLE, to mention just one example.

Capacity Development

All 938 participants to the conference have been, as mentioned, included to IHDP listservs and will thus keep being informed about the activities of the Human Dimensions community worldwide. Access to information, as well as personal contacts initiated during the Open Meeting, is of great value especially for the researchers from the Global South and in the beginning of their careers. The Open Meeting contact pole will be used frequently in the future by IHDP and its projects, while looking for scientific partners or distributing the products and calls. Most important, to enable the participation of promising younger scholars in international processes is a key parameter both for their individual scholarly development, as well as the quality of science pursued by the various international activities. Hence, the attendance of about 80 scholars, who received a stipend from supporters such as APN, was of crucial importance in making the IHDP Open Meeting 2009 a success.

Science-Policy Interaction

Finally, the IHDP Open Meeting 2009 paid much attention to the interface of science and practice during the conference, building on a scientific agenda that addressed some of the most pressing issues of our time. Using its status as one of the largest Bonn based UN conferences of 2009, IHDP was able to attract exciting keynote speakers from the policy realm, complementing contributions from leading scholars in human dimensions research. For example, Dessima Williams, Alliance of Small Island States (AOSIS) and an eminent voice in the run-up to and at COP 15 in Copenhagen, addressed the plenary on Equity and Social Cohesion. About 30 delegates from the AOSIS group participated in the Open Meeting for one day and attended several sessions to learn and exchange ideas on adaptive management. Each day of the conference concluded with a series of public events, which enabled the wider public from the region to receive exposure to cutting-edge research; experiment with new forms of presenting; and further debate hot issues. A fiery debate in a crowded plenary hall on the "Role of Science in the 21st Century" was a true highlight of the meeting, as was "Catastrophe Sells", a roundtable on the role of the media in global environmental change, again, just to mention 2 out of 5 public events. The Open Meeting thus provides researchers with a great opportunity to present the policy relevance of their work.

References

Appendices

General Timeline

	26 April	27 April <i>Grand Opening & Demographic Challenges</i>	28 April <i>Resources & Technological Innovation</i>	29 April <i>Social Equity, Cohesion & Sustainable Adaptation</i>	30 April <i>Adaptive Institutions & Governance</i>	
8:00		Registration				
9:00		Opening Cer- emony <i>See Page 25</i>	Plenary Session <i>See Page 32</i>	Plenary Session <i>See Page 37</i>	Plenary Session <i>See Page 43</i>	
9:30						
10:00						
10:30		Break				
11:00		Plenary Session <i>See Page 26</i>	Special Sessions <i>See Page 30-31, and Session Abstracts</i>	Special Sessions <i>See Page 36, and Ses- sion Abstracts</i>	Special Sessions <i>See Page 42, and Ses- sion Abstracts</i>	
11:30						
12:00						
12:30		Lunch	Lunch <i>National Committees Lunchtime Get- Together, See Page 44</i>	Lunch <i>New Initiatives Lunch- time Get-Together, See Page 44</i>	Lunch <i>Young Researchers Lunchtime Get- Together, See Page 44</i>	
13:00						
13:30						
14:00	Registration, arrival, set-up	Parallel Sessions <i>See Page 24, and Ses- sion Abstracts</i>	Parallel Sessions <i>See Page 30-31, and Session Abstracts</i>	Parallel Sessions <i>See Page 36, and Ses- sion Abstracts</i>	Parallel Sessions <i>See Page 42, and Ses- sion Abstracts</i>	
14:30						
15:00						
15:30		Break				
16:00		Parallel Sessions <i>See Page 24, and Ses- sion Abstracts</i>	Parallel Sessions <i>See Page 30-31, and Session Abstracts</i>	Parallel Sessions <i>See Page 36, and Ses- sion Abstracts</i>	Parallel Sessions <i>See Page 42, and Ses- sion Abstracts</i>	
16:30						
17:00						
17:30		Break				Closing Ceremony
18:00		Roundtable <i>See Page 27</i>	Round- tables <i>See Page 33-34</i>	Poster Session	Round- tables <i>See Page 38-39</i>	
18:30						
19:00	City of Bonn: Welcome Reception <i>See Page 22</i>					
19:30						
20:00		BMBF Reception <i>See Page 28</i>			IHDP Open Meeting Reception <i>See Page 40</i>	
20:30						
21:00						

Members of the International Scientific Planning Committee (ISPC) for the IHDP

Open Meeting 2009

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Full papers and session abstracts

Full papers and session abstracts can be downloaded from the IHDP Open Meeting 2009 website under:

Day 1: <http://www.openmeeting2009.org/papers-1demographics.html>

Day 2: <http://www.openmeeting2009.org/papers-2resources.html>

Day 3: <http://www.openmeeting2009.org/papers-3equity.html>

Day 4: <http://www.openmeeting2009.org/papers-4institutions.html>

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First Name	Last Name	Gender	Country	Stipend (EURO)
SANDHYA	SRI	Female	India	675
Linkham	Douangsavan	Male	Lao People"s Democratic Republic	1,475
Ha	Vien	Male	Viet Nam	1,900
Huy	Nguyen Ngoc	Male	Japan	1,475
BRUCE	Glavovic	Male	New Zealand	1,475
Jharna	Chakravorty	Female	India	875
Weirong	Shen	Male	China	1,175
Tatiana	Gadda	Female	Japan	1,075
Ghazala	Nasim	Female	Pakistan	1,475
Ernan	Rustiadi	Male	Indonesia	875
Golam	Rasul	Male	Nepal	1,175
Mahdi	Zarghami	Male	Iran, Islamic Republic of	875
Nagaraja	Badenahally	Male	India	175
lalal	Attari	Male	Iran, Islamic Republic of	875

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Glossary of Terms

ACCFP: African Climate Change Fellowship Program
AOSIS: Alliance of Small Island States
CSIRO: Commonwealth Scientific and Industrial Research Organisation
ESG: Earth System Governance
ESSP: Earth System Science Partnership
KLSC: Knowledge, Learning, and Societal Change in the Transition to a Sustainable Future
GECHS: Global Environmental Change and Human Security
GLP: Global Land Project
GTZ: Deutsche Gesellschaft für Technische Zusammenarbeit
IDRC: International Development Research Centre
IHDP: International Human Dimensions Programme on Global Environmental Change
IRG: Integrated Risk Governance
IRGC: International Risk Governance Council
ISPC: International Science Planning Committee
IT: Industrial Transformation
LOICZ: Land-Ocean Interactions in Coastal Zones
SEI: Stockholm Environment Institute
START: The global change SysTem for Analysis, Research and Training
UGEC: Urbanization and Global Environmental Change
WCCB: World Conference Center Bonn