



IHDP Open Meeting 2009

7th International
Science Conference on the
Human Dimensions of
Global Environmental Change

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The Social Challenges of Global Change

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Concept Note

The theme of the 7th Open Meeting of the International Human Dimensions of Global Environmental Change, “Social Challenges of Global Change,” responds to important changes in the perspective of the scientific community on the challenges that we are currently facing and outlines the new research agenda for IHDP’s second decade. IHDP is a joint programme of the International Council for Science (ICSU), UNESCO’s International Social Science Council (ISSC), and the United Nations University (UNU). The 7th Open Meeting will be the first one under the overall guidance of IHDP’s Strategic Plan 2007-2015 and a major contribution to its implementation.

There is more and more emphasis on the role of human beings as actors in global environmental change – an insight just recently acknowledged by the IPCC’s 4th Assessment Report. But peoples’ actions do not only alter physical environments. After all, human beings define their environment, both natural and social; and human beings define what an “environmental problem” is, and what a “solution” for such a problem, should look like.

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 that 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 of the world population will be needed to address the emergent consequences of our continual modification of the global environmental systems.

The scientific framework of the IHDP Open Meeting 2009

Although the IHDP Open Meeting 2009 will, as usual, accord an important place to “bottom-up” research, and will provide ample opportunity to highlight the current activities of the IHDP community, the overall scientific framework of the meeting consists of three components and will make sure that the Social Challenges of Global Change are being addressed in a coherent manner: (1) four major social challenges, (2) specific issue areas, and (3) crosscutting themes. Particularly central parts of the

7th Open Meeting, e.g. our plenary sessions and some of the other activities, will structure the meeting in the light of this overall scientific framework.

Major Social Challenges

Four major social challenges have been identified which are both paramount for 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 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. We urgently need to posit 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 over-

come 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.

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. In order to achieve this, we need to know how inequities emerge, and why they persist. Key issues are: "How do human prejudices work to the disadvantage of some in society, and how can they, for example, be manipulated at a symbolic level in political debate?"; and "How do humans construct narratives of justice and act upon them?"

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

Such questions 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. But the challenge to governance goes deeper than just creating new indicators. 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. New kinds of arrangements must be made to rebalance the relationship between formal and informal institutions, consequently between citizens and experts, acknowledging that citizens hold valuable knowledge that is key to creating sustainable communities at all levels of society from the village to the globe. And, just as importantly, new avenues of decision making must be opened up to enable scrutiny and reflection in the design, creation, and management of managerial and technological as well as scientific systems to ensure the achievement of sustainable societal and ecological outcomes.

These four challenges are not intended to limit the topics that can be addressed at the 7th Open Meeting 2009, but to frame and focus presentations and discussions.

Key Issues

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 will of course be ubiquitous at the IHDP Open Meeting 2009. However, we propose to link them, where possible, to the four challenges. Sessions convened on specific issues should, to a certain extent, go beyond their specific themes and demonstrate their interconnectedness to one or more social challenges. When, for example, talking about the water crisis or urban-

ization processes at this Open Meeting, they should address 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?"

The Crosscutting Themes

The crosscutting themes constitute the third, and last, component of the (matrix) design of the Open Meeting. By way of example we point to four such themes that seem of increasing importance, but it is likely that many others will emerge on our way toward the Open Meeting and at the Meeting itself.

System changes and transitions

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. At IHDP we believe this problem to be relevant in all development contexts, and propose to highlight sustainability transitions during the Open Meeting.

Relationships between different scales

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.

The role of perceptions and values

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.

What directions could research go to address these issues?

The last crosscutting theme proposed here is the future of our research itself. In this context, it is 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 questions we should consider asking ourselves are “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 will be addressed.