IHDP
International Human Dimensions Programme
on Global Environmental Change

Annual Report 2013

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ICSU
International Council for Science

UNITED NATIONS
UNIVERSITY

Annual Report 2013

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Contents

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INTRODUCTION

"Our challenge lies in the gap between the studies, models, and solutions that arise from the social sciences and those of the natural and physical sciences – a gap that IHDP has worked to bridge for twenty-four years."

It is a truism to say the solutions to our problems lie in understanding their root causes, yet it is one that bears repeating when looking at the global problems of climate change and biodiversity loss. In the Anthropocene Age, in which human actions are a primary driver of environmental changes, these problems cannot be addressed without understanding the behaviour of human beings – of our social structures and dynamics, our economic systems, and our values. The issue is of both moral and practical consequence. While it is true the planet will endure in spite of our best efforts to undermine it, what type of environment it will provide for the generations to come is very much up in the air. Will humanity, as a collective, be happy about the world they live in fifty or one hundred years from today? Will they be satisfied with their employment, with their relationships, with their natural environment? Our challenge now lies in the gaps between the studies and models and solutions that arise from the social sciences and

those of the natural and physical sciences – a gap that IHDP has worked to bridge for twenty-four years.

Of those twenty-four years, 2013 was for IHDP one of the most significant. At the 2013 annual meeting, the IHDP Scientific Committee took the difficult decision to close the IHDP Secretariat in June of 2014, in doing so ending the chapter we began over two decades ago, and beginning a new one in the creation of the ten-year Future Earth initiative. The legacy of IHDP will live on in Future Earth, and in the work of the networks we have built up, and scientists we have supported over the years. IHDP set a benchmark for cross-cutting research and action on global environmental change, and was recently listed among the top ten of climate-related think tanks. Our impact is a testimony to the excellent work done both by our science projects, as well as our coordinating Secretariat.

I am happy to report that the IHDP projects have been very active in the discussions on transitioning their networks to Future Earth. All IHDP projects will become part of the Future Earth portfolio of projects. A first call for fast track and cluster activities, designed in collaboration with the other global environmental change projects, has already set into motion a funding mechanism to support project-related activities. The call to bring in new networks of relevance as criteria for funding is definitely a step in the right direction.

The projects have also had a very active and successful year of cutting-edge research and collaboration, including IRG's increased collaboration with international institutes in their work toward helping scientists and decision-makers better understand the complexity of social-ecological systems; ESG's open science meeting in Tokyo; and a LOICZ assessment on coastal changes in the Artic, to name just a few.

I am also pleased to report significant progress on the Inclusive Wealth Report, a keystone initiative of the IHDP Secretariat. The initial group of 20 countries assessed in the 2012 report has been expanded to 140 countries, and with its special focus on human capital, the IWR 2014 is well on its way to be published in the fall. We have organized three expert workshops, in collaboration with UNESCO and UNEP, in Paris, Bangkok, and Nairobi. In addition, the IWR 2012 has seen broad release and generated immense interest at numerous international symposiums and conferences.

It was a year of mixed success in the science-policy arena. The Convention on Biological Diversity (CBD) approached the IHDP Secretariat to put together a team of social scientists to write a consultation paper for the Trondheim Conference – a prelude to the SBSTTA meeting. The paper was well received, and indeed became a key information paper for the deliberations at the subsequent SBSSTA meeting in Montreal. IHDP also maintained its active role in the newly-established Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES). While the Bureau and multi-expert panels were established, we were less successful in placing social science experts in these two bodies within IPBES. The experience has taught us how far yet we have to go in closing the gaps between the social sciences and the policy communities addressing global environmental issues. The absence of the social sciences in critical mass in these science-policy processes will translate to only limited success in addressing the underlying anthropocentric drivers of change.

I end this final annual report of IHDP on a bittersweet note. I am optimistic of the future; optimistic that the social sciences will play ever more important roles in addressing global environmental changes. But I am truly sad to say good-bye to my young and enthusiastic team at the IHDP Secretariat, the silent warriors working long hours under humble conditions to push for a better world. To them I say: Thank you, and I wish you every success in your future careers. Last but not least, I would like to take this opportunity to thank the IHDP Scientific Committee members and in particular its Chair, Sir Partha Dasgupta, for his valuable guidance and support. It has been an honour and a pleasure serving IHDP, and I look forward to seeing its legacy continue to unfold.

Prof. Anantha Duraiappah
Executive Director of IHDP

Message from the Chair of the Scientific Committee

I write this with a sense of gratitude to the entire IHDP family, with pride in what we have accomplished together, but also with much personal sadness that we will go our own way later this year. IHDP has nurtured research programmes not only from those that have been proposed from outside, but more recently also from those that were internally generated by the existing academic staff.

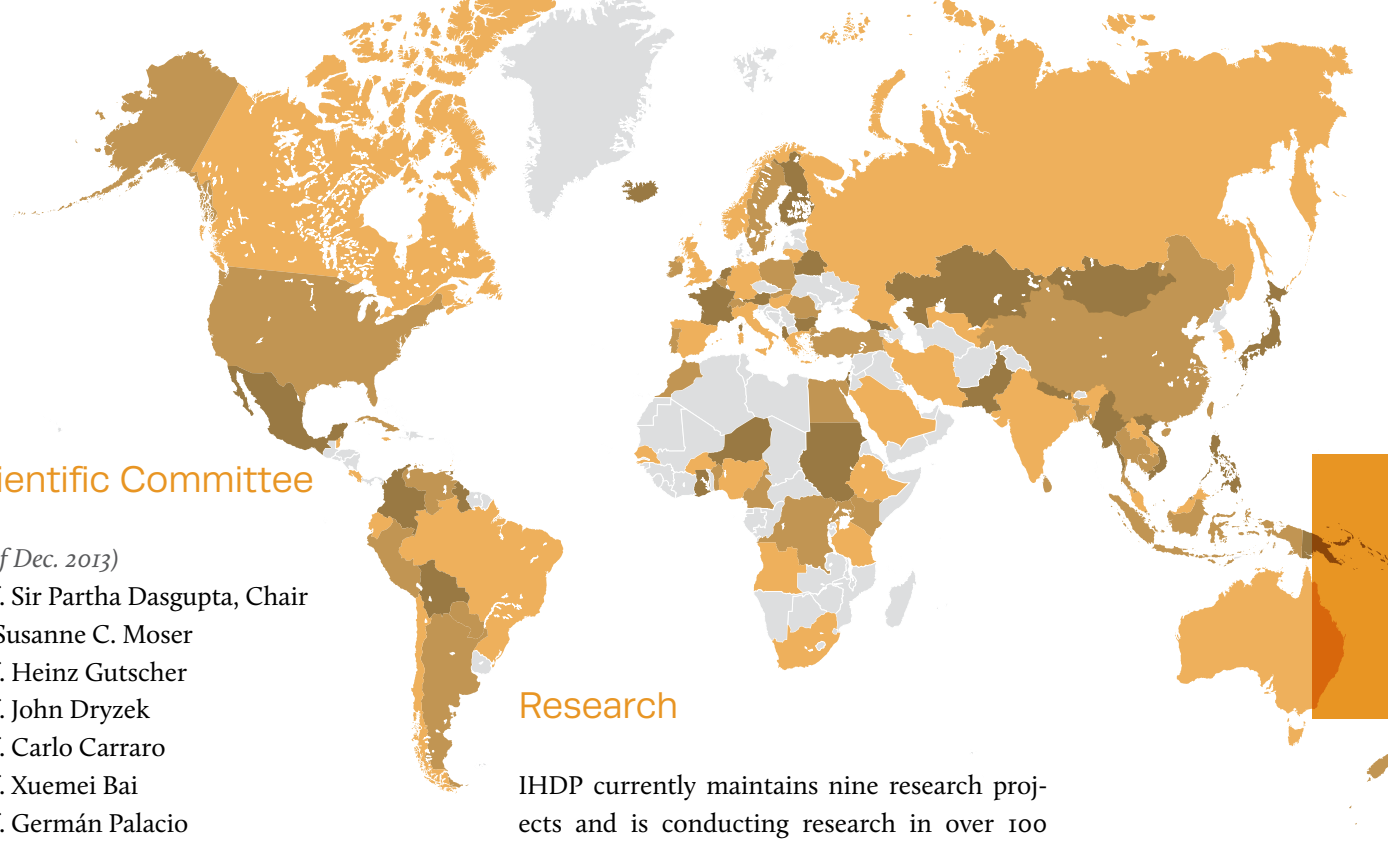
Ever since assuming the chairmanship of the Scientific Committee three years ago, it has been an education to read IHDP's intellectual products. It has also been a pleasure and an experience in learning to discuss scientific matters with all who have been engaged in IHDP Programmes. In all this the intellectual leadership that our Executive Director has shown has been more than exemplary. But I cannot stress strongly enough that the wonderful body of research the institution has produced and has helped to produce could not have been created but for the administrative leadership and support from an amazing staff at IHDP. I have often used this space to thank IHDP's academic and administrative staff for their outstanding work. Now, as they prepare to close the curtains in Bonn and begin a new chapter in their work, it bears repeating. I feel proud and privileged to have been associated with the IHDP staff. I have not seen such zeal, ability and indeed enjoyment in the process of work as that which I experienced at the Bonn headquarters over the past years.

Prof. Partha Dasgupta
Chair of IHDP's Scientific Committee

Our mission is to produce, promote, and coordinate innovative social science research that informs and improves societal responses to global environmental change.

The International Human Dimensions Programme on Global Environmental Change is an interdisciplinary science programme, working towards a better understanding of the interactions of humans with and within their natural environment. IHDP advances interdisciplinary research and collaborates with the natural and social sciences. It enhances the capacities of science and policy communities through a large network and furthers a shared understanding of the social causes and implications of global change. The programme facilitates dialogue between science and policy to ensure that research results feed into global policy-planning and lawmaking processes, and offers training to future leaders in the field.

IHDP was founded by the International Council for Science (ICSU) and the International Social Science Council (ISSC) of UNESCO in 1996. The IHDP Secretariat is hosted by the United Nations University (UNU) in Bonn who joined as third sponsor in 2007. IHDP's research is guided by an international Scientific Committee comprised of renowned scientists from various disciplinary and regional backgrounds.



Scientific Committee

(as of Dec. 2013)

Prof. Sir Partha Dasgupta, Chair
Dr. Susanne C. Moser
Prof. Heinz Gutscher
Prof. John Dryzek
Prof. Carlo Carraro
Prof. Xuemei Bai
Prof. Germán Palacio
Prof. Elena Nikitina
Prof. Ilan Chabay
Prof. Dan Ariely
Dr. Balgis Osman-Elasha
Honorable Prof. Ruth Khasaya Oniang'o

Research

IHDP currently maintains nine research projects and is conducting research in over 100 countries. Its key research areas are:

- Well-being, Green Economy, Beyond GDP
- Societal Transformations
- Environmental Governance
- Ecosystem Services

Research covering over 100 countries

Knowledge generated by 9 research projects

Reaching nearly 6000 community members

It takes the full mobilization of the social sciences to address the many challenges on the road towards a sustainable planet.

Mobilizing the Social Sciences

Sustainability is a human issue. In order to understand what steps society must take to address global change, we must first assess and understand what societies require to ensure their well-being – and what they perceive as their needs based on beliefs and values. To successfully meet this challenge, IHDP maintains a balanced portfolio of research projects: By means of these multi-disciplinary teams of scientists and their integrated, long-term research on cutting-edge themes, IHDP has been at the forefront of mobilizing and integrating social science research to the largely natural sciences-dominated global environmental change debate. Thereby, it effectively addresses the drivers of, impacts on, and potential responses to global environmental change. With the research projects' cutting-edge work, IHDP has helped to reframe environmental research agendas, putting social questions into the focal point.

Social Science for Policy

Decision-makers need the opportunity to consult with scientists before making policy choices. And global change scientists must understand societies' needs before the outset of focused research initiatives. IHDP works to strengthen the interaction and dialogue between these two communities. The programme's value added toward addressing global needs in both policy and research resides in its power to convene, mobilize, and catalyze research and dialogue. The Secretariat has access to intergovernmental processes and long-standing experience with multidisciplinary approaches. IHDP projects' findings are transformed and translated for policy audiences in the Summary for Decision-Makers publication series. Further, IHDP and its community have been actively involved in the framing of the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES), working toward instilling the social science perspective into its fundamental structure.

Education and Training

Capacity building through education and training is another important element of our work as we aim to broaden and strengthen the community of young social scientists working on the human dimensions of global environmental change. The IHDP network includes members from over 100 countries and facilitates collaboration among more than 550 active project researchers, creating linkages among scientists and policymakers and strengthening research capacities in developing countries. IHDP provides early and mid-career scholars with the knowledge and skills needed to become leaders on the social challenges of environmental change within their regions. This approach includes training workshops, networking, open science conferences, writing contests, and career opportunities with an inter- and multidisciplinary focus. It aims to establish a broad science–policy–public learning process that can increase the shared understanding of complex issue areas of global environmental change.

Photos: Sudan/UN Photo Fred Noy, Vietnam/UN Photo Kibae Park

HIGHLIGHTS FROM 2013

Making waves as key social science knowledge platform for global change

IHDP ranked among top ten European climate think tanks

Placed at 9th in the first standardized ranking of the 2012 International Center for Climate Governance (ICCG) Climate Think Tank Ranking published in June, IHDP ranked within the top 10 of 34 European think tanks specializing in the field of climate change economics and policy. The first place in the European category was awarded to Basque Centre for Climate Change (BC3), and the winner in the Global category is the Belfer Center for Science and International Affairs with its Environment and Natural Resources Program.

The ranking primarily takes the per capita productivity into account, thus considering all activity outputs of think tanks in 2012 relative to the number of their researchers. It is based on quantitative and analytical data, translated into both bibliometric and non-bibliometric indicators. The latter have been carefully selected and are based on objective and calibrated criteria according to the feedback provided by experts within the field.

The data search has been conducted in a composite manner: through a survey launched in January 2013 to 260 think tanks included in the ICCG Think Tank Map, as well as through the search of available data on the official websites of a selection of the most renowned think tanks, and on the websites of international organizations responsible for climate change economics and policy (i.e. IPCC, UNFCCC, EU).

Besides the Standardized Ranking for both the European and the Global category, ICCG also established an Absolute Ranking for both categories, evaluating the overall productivity of think tanks in 2012. Yet, only the Standardized Ranking determined the winners of the 2012 ranking.

More information on the results, methodology, and background of the ICCG Think Tank Ranking can be found in the Methodological Report. The winner announcement and the awarding ceremony were held on 27 June 2013 in the framework of the 20th annual EAERE Conference in Toulouse, France.

Scientific Committee Meeting in Taipei

From May 16 to 18, 2013, the IHDP Scientific Committee (SC) gathered in Taipei for its 20th annual meeting in order to discuss the programme's activities and research portfolio. The main emphasis was put on the transition of the IHDP network and activities to the new Future Earth initiative, as well as on synthesizing the vast knowledge obtained during the decades of IHDP's operation and research.

In the context of Future Earth to become operational in mid 2014, the participants officially decided on the closure of the IHDP Secretariat in June 2014. The bodies of the new initiative will subsequently replace the Secretariat. IHDP's projects, National Committees, and networks were invited to join Future Earth. During the meeting, the members of the IHDP community discussed how to actively co-shape Future Earth and ensure for strong representation of social science and human dimensions research in its portfolio. Participants stressed the opportunities offered by this new interdisciplinary, integrative, solution-oriented, and demand-driven initiative for global change research.

Photos: IHDP

In light of the transition of IHDP activities to Future Earth, SC meeting participants agreed on the usefulness of performing a synthesis activity to harvest top scientific outcomes from the past IHDP research portfolio and present them in a series of activities and written products openly accessible for the general public, policymakers, and future researchers contributing to Future Earth.

Immediately following the meeting, the IHDP National Committee – The Academy of Sciences located in Taipei, who kindly hosted the 2013 Scientific Committee meeting, invited all participants to join the policy forum "Vulnerability, Adaptation and Resilience: Taiwan Reflections." IHDP researchers, together with the representatives of the Taiwanese government, policymakers and scientists, discussed policy measures and governmental strategies for response to environmental challenges.

"On the Emergence of Social–Ecological Complexity in the Amazon"

Lecture by Prof. Eduardo Brondizio

In June of 2013, IHDP was honoured to host anthropology professor Eduardo Brondizio of Indiana University Bloomington and resident fellow at Institut d'études avancées de Paris (IEA), who presented his project on the Amazon as a microcosm of social acceleration in the Anthropocene in a lecture on UN Campus.

Prof. Brondizio vividly demonstrated how, over the past 40 years, the Amazon has been home to a new sense of time: the urgent and overwhelming acceleration of the Anthropocene. During this period the region has turned into what can perhaps be called the greatest and most dynamic laboratory of policies, views of development, democratization and multiculturalism, political ideologies and environmental agendas, with massive changes put in motion by government plans of national (geopolitical) integration during the 1970s, and subsequent cultural, demographic, infrastructural, economic, and political changes. Having some of the highest poverty rates in Latin America, the region continues to challenge social policies, whereas a majority urban population lives with limited access to public services in municipalities that are too insolvent to follow the pace of change and to provide them.

Social and environmental change in the region, said Prof. Brondizio, was often thought of, and often misunderstood, as hierarchically and linearly organized, with conditions set at the macro-scale resulting in predictable outcomes at regional and local levels. This approach has been commonly used for the interpretation and proposal of policy solutions for regional problems such as deforestation, failure of agrarian settlements, exponential and deficient urbanization, failure of development initiatives, and recurrent inequality and economic underdevelopment. Prof. Brondizio warned that while many important insights had come from this broad geographical scope, macro-level interpretations obscured important inter- and intraregional processes and interactions.

Photos: IHDP

In order to address these shortcomings, Prof. Brondizio is developing a project at IEA aiming to confront the tendency to rely on structural determinism and macro-regional interpretations to explain regional change and to propose solutions to regional development. The project is designed to call attention to the processual nature underlying the way various forms of structural conditions and local action interact in forming and transforming the Amazon today and in the future, and the central role of considering local level decisions and dynamics as the mechanisms of change underlying regional transformation and shaping the region's future.

Among others, the project examines changes in household organization and expectations about consumption and migration, and the implications of these processes for the urbanization of the Amazon. At another level, it examines how articulations between social movements and national and global conservation agendas (alliances in many cases conceived and facilitated by academics) to contain the advancement of agro-industrial frontiers underlie a process of institutional territorialization of the region. As a whole, the project examines how the intersection of rural, urban, indigenous, and conservation areas has created an interconnected and interdependent system representing vectors of change that pose new challenges for analysis and for policies.

Workshop on "Beyond GDP" at Global Media Forum

As part of the 6th Global Media Forum, held in Bonn from 17 – 19 June 2013, UNU-IHDP together with UNU-WIDER and the German Society for International Cooperation (GIZ) conducted a workshop entitled "Beyond GDP: Inclusive Measures of Economic Progress". IHDP Executive Director Prof. Anantha Duraiappah and Academic Officer Dr. Pablo Muñoz were among the panelists who gathered at the World Conference Center's plenary chamber to discuss the need to shift from a focus on economic growth to one on economic progress.

Along with the other panel members – Prof. Tony Addison (UNU-WIDER) and Mark Schauer (GIZ) – they argued that Gross Domestic Product (GDP) was an insufficient and misleading indicator of both economic progress and human well-being, as it only focused on short- term economic production and failed to reflect the state of a nation's natural environment, long-term sustainable growth, or inequality. Focusing on GDP, a nation could deplete all of their natural resources and still display positive GDP growth; however, this growth would come at the expense of the

Photos: UNU/Katharina Brach

environment, human well-being, and future sustainability. Consequently, new metrics for measuring wealth were urgently needed.

In response to this need, Dr. Muñoz explained how the Inclusive Wealth Report, released in 2012 by UNU-IHDP in collaboration with the United Nations Environment Programme (UNEP), introduced a new economic index: the Inclusive Wealth Index (IWI). The IWI takes a more holistic approach to calculating a nation's wealth by taking into account natural (e.g. forests, fossil fuels), produced (e.g. machinery, infrastructure) and human capital (e.g. education). The IWI of 20 countries were assessed by the report, representing 56 per cent of the world's population and 72 per cent of world GDP. By performing a more comprehensive analysis of a nation's wealth, the IWI illustrates whether economic growth is sustainable in the long-term and whether this growth comes at the expense of other resources.

Prof. Addison addressed the challenges and opportunities facing inclusive growth research. He identified the need for better metrics to capture the many dimensions of human development as one of the core challenges of inclusive growth research. He also suggested that inclusive wealth research needed to move beyond the goal of poverty reduction to the more ambitious goal of promoting equality.

The event emphasized the need for indicators such as the IWI to prove to decision-makers that it was worth investing in natural capital as a way of reinvesting in wealth. It was also remarked that if we were to successfully adopt new ways of thinking about a nation's wealth, there needed to be stronger partnerships and communication between science, politics, and the private sector.

Inclusive Wealth Report 2014

After the highly successful launch of the Inclusive Wealth Report 2012 (IWR 2012) at Rio+20, the year of 2013 was filled with exciting activities in preparation of the second report, the IWR 2014, to be released in the fall of 2014.

The IWR 2014 will report on the wealth and changes in the wealth of nations, with a particular focus on human capital. It presents a framework that offers a long-term perspective on human well-being and sustainability, based on a comprehensive analysis of nations' productive bases and their link to economic development. It was developed on the notion that current economic production indicators such as gross domestic product (GDP) and the Human Development Index (HDI) are insufficient, as they fail to reflect the state of natural resources or ecological conditions, and focus exclusively on the short term without indicating whether national policies are sustainable. The IWR features an index that measures the wealth of nations by looking into a country's capital assets, including manufactured, human and natural capital, and its corresponding values: the Inclusive Wealth Index (IWI).

Engagement Workshop on the Inclusive Wealth Report

An engagement workshop on the Inclusive Wealth Report took place in Paris in April, marking the first time IHDP, in collaboration with UNEP and UNESCO, brought together government officials and experts from around the world as part of a workshop.

In light of the interest generated by the IWR at Rio+20, the workshop was organized with the following objectives:

- Discuss the findings of the first IWR
- Elaborate on the methodology, approaches and dataset used in the report
- Engage environment, education, health and planning ministries in a dialogue to find ways to improve and mainstream IWI
- Introduce a brief overview of the IWR 2014 (proposed focus is on human capital and health), and receive feedback from policy-makers on specific policy questions to be addressed
- Create awareness and need for the IWR amongst the donor communities
- Develop a work plan for the IWR 2014

The workshop targeted middle and senior level government officials, donor agencies, regional organizations, and development banks, the scientific community, other UN Agencies such as UN Stat, UNESCO, UNDP, EEA, UN-DESA, and the World Bank.

The IWR applauded at the Trondheim Conference on Biodiversity

Also in 2013, the IWR was praised at the Trondheim Conference on Biodiversity. CBD Executive Secretary Braulio Ferreira de Souza Dias and Abdul Hamid Zakri, Chair of the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES), in their keynote addresses acknowledged the IWR as an innovative and convincing approach to measuring economic progress beyond GDP.

Stressing the need for broader social science input for the CBD's programme of work and its efforts in reaching the Aichi Targets, Mr. Dias highlighted the need for better tools, such as the Inclusive Wealth Index (IWI), to integrate biodiversity and ecosystem services into national accounting.

Touching on issues such as the post-2015 development agenda, Mr. Zakri noted the need to ensure the Aichi targets are fully taken into account and to develop a vision going beyond gross domestic product (GDP), along the lines of the Inclusive Wealth Index, which aims to capture the value of natural resources.

Upon invitation by the CBD, the IWR was presented to the Plenary by IHDP Executive Director Anantha Duraiappah and UNEP Chief of the Ecosystem Services Economics Unit Pushpam Kumar. Explaining how the IWR's measurements of natural capital offer meaningful information for the Aichi targets – including in the areas of fossil fuels, fisheries, and forest resources – the speakers highlighted the report's potential to offer insights on key policy questions, such as the sustainable rate of consumption of society's productive base and the identification of key investments to strengthen that base.

The seventh Trondheim Conference on Biodiversity which took place under the title "Ecology and Economy for a Sustainable Society" provided input to the CBD's preparations for the twelfth meeting of the Conference of the Parties (COP-12). The event aimed to advance a scientifically informed dialogue on critical issues on the agenda of the CBD after the Rio+20 Conference in June 2012. 2013 saw particular focus on addressing the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society.

Paper "Managing Biodiversity is About People" in CBD discussions

Conference-goers at the seventh Trondheim Conference on Biodiversity discussed the collaborative IHDP paper "Managing Biodiversity is About People." The work was commissioned by the CBD and coordinated by IHDP in the run-up to the Trondheim conference. Written by Anantha Duraiappah, Stanley Asah, Eduardo Brondizio, Lori Hunter, Nicholas Kosoy, Anne-Helene Prieur-Richard, and Suneetha Subramanian it aims to provide policymakers and others involved in biodiversity management with context and illustrations of the key insights and deeper understanding of social systems that social science research can bring to the practical challenges in biodiversity management.

The paper, presented by Stanley Asah of the University of Washington, broadens the perspectives of the human dimensions of biodiversity and ecosystem services management, while underscoring the role of social sciences in achieving the Aichi targets and the need for policymakers to take into account human motivations and behaviours in the debates and discussions on biodiversity policy. The article was well received by the CBD community and stimulated lively discussion on the issues. It further prompted a debate on utilizing some of its key messages to inform the 17th SBSTTA meeting to be held in Montreal in October 2013. This initiative also highlights how the new leadership at IHDP has taken a serious attempt at strengthening the science-policy interface. The writing team brought together researchers from IGBP, DIVERSITAS, and IHDP as well as from the broader social sciences community of ecological economists, behavioural sciences and human development.

Selected publications from IHDP projects and endorsed networks

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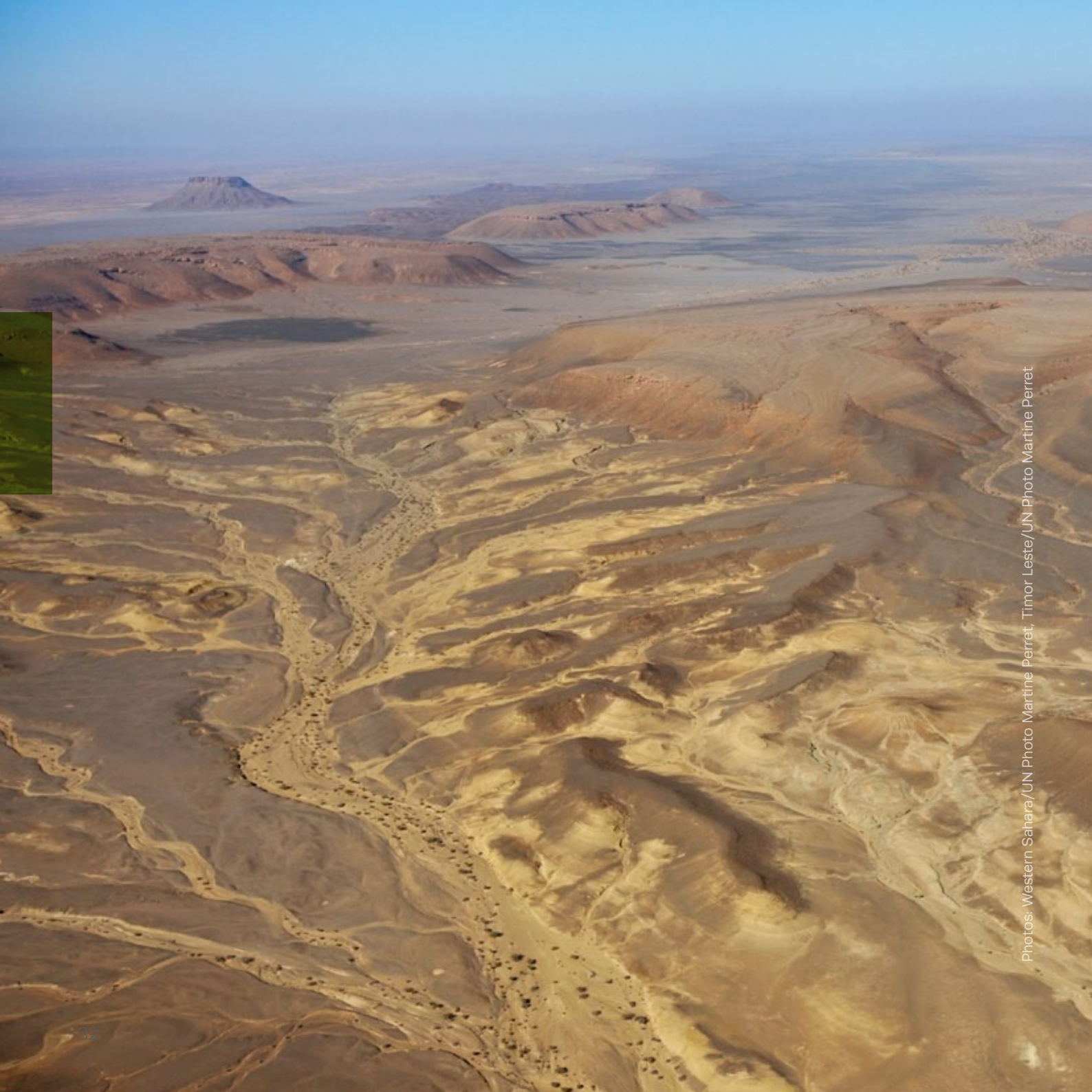


Photos: Western Sahara/UN Photo Martine Perret, Timor Leste/UN Photo Martine Perret

IHDP NETWORK

IHDP Secreteriat

The IHDP Secretariat advises, coordinates, and supports IHDP's research projects and National Committees. It collaborates closely with its partner global change programmes (DIVERSITAS, IGBP, and WCRP) and liaises with the broader research network. Since 2007, the IHDP Secretariat has been hosted by the United Nations University Vice Rectorate in Europe (UNU–ViE) in Bonn, Germany.

Inclusive Wealth Report 2014

The IHDP Secretariat was busy all through 2013 with the work on the Inclusive Wealth Report 2014 (IWR 2014), the second edition of a series of reports measuring the wealth of nations by carrying out a comprehensive analysis of a country's capital assets, including manufactured, human and natural capital. The IWR is scheduled for release in the fall of 2014. See page 24 for more information.

Lecture by Prof. Eduardo Brondizio

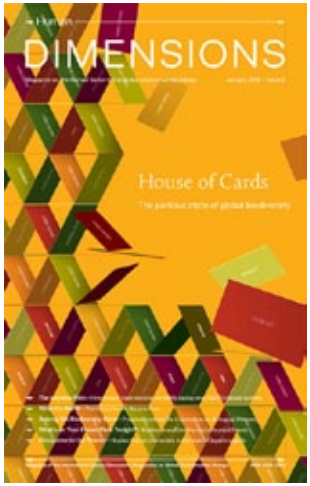
In June, anthropology professor Eduardo Brondizio of Indiana University Bloomington and resident fellow at Institut d'études avancées de Paris (IEA) presented his project on the Amazon as a microcosm of social acceleration in the Anthropocene in a lecture on UN Campus. See page 20 for a detailed account of the lecture.

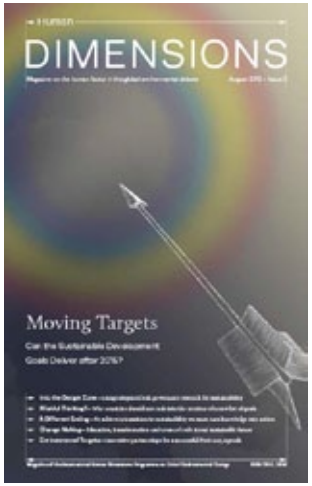
Workshop on "Beyond GDP" at Global Media Forum

As part of the 6th Global Media Forum, UNU-IHDP together with UNU-WIDER and the German Society for International Cooperation (GIZ) conducted a workshop entitled "Beyond GDP: Inclusive Measures of Economic Progress". IHDP Executive Director Prof. Anantha Duraiappah and Academic Officer Dr. Pablo Muñoz were among the panelists who gathered at the World Conference Center's plenary chamber to discuss the need to shift from a focus on economic growth to one on economic progress. More information on the event can be found on page 22.

Dimensions issues

2013 saw the release of two new issues of IHDP's popular in-house Dimensions magazine, a print and online medium that contributes to present debates and offers a platform for discussion and opinions:





House of Cards
The perilous state of global biodiversity

In early 2013, Dimensions took on the critical and intertwining subjects of global biodiversity and ecosystem services. IHDP was especially delighted to feature an exclusive introduction by His Royal Highness The Prince of Wales, whose thought-provoking piece set the tone for a variety of articles, interviews, and opinions on these increasingly important issues.

Moving Targets
Can the Sustainable Development Goals Deliver after 2015?

The Millennium Development Goals (MDGs) have been shaping the global development agenda for over a decade. With the target date of 2015 fast approaching, determining a new development agenda has become an urgent priority for the international community. Following an agreement by Member States at the Rio+20 summit in 2012, a process has been launched to develop a set of Sustainable Development Goals (SDGs) as a successor framework to come into effect after the MDGs expire. The new goals are to address the multiple crises facing humanity through a more inclusive process, aiming for equal treatment of the economic, social, and environmental dimensions in the implementation.

All Dimensions issues can be (pre-) ordered or downloaded at: http://www.ihdp.unu.edu/article/read/dimensions

"The Earth System Governance research alliance had a year of cutting–edge research and collaboration, including our inspiring open science meeting in Tokyo, our new fast–track activities around research methodology and sustainable development goals, and our successful regional initiatives."

Frank Biermann, Project Chair

People Places Planet Earth System Governance

Earth System Governance Project

The Earth System Governance (ESG) Project is the largest social science research network in the area of governance and global environmental change. It explores political solutions and novel, more effective governance mechanisms to cope with the current transitions in the biogeochemical systems.

In the past year, research on earth system governance has come again to many new findings and practical, theoretical, and methodological insights to better understand and improve governance in the anthropocene. These include re-conceptualizations of water governance, advancements in research on the institutional fragmentation and orchestration in environmental governance, and the analysis of the role of International River Basin Organizations. 2013 has resulted in interesting insights into the role of science in environmental governance, including the process and organization of effective research for and building on the experience of environmental governance research which suggests that acknowledging and embracing the complex relations between expert knowledge and politics is necessary to make their relation mutually supportive. The research efforts on governance "for" and "of" the Sustainable Development Goals, which started in 2013, already resulted in initial conceptual results that indicate substantial progress and results to be expected in 2014.

"2013 was a very important year for GCP with the launch of the Global Carbon Atlas, a new communication and delivery online platform to tailor information to stakeholders."

Corinne Le Quéré, Project Co-chair

In 2013, GCP found that for 2012, fossil fuel emissions grew to 9.7 GtC yr-1, 2.2% above 2011, reflecting a continued growing trend in these emissions, and leading to the largest increase in atmospheric CO2 of 5.1 GtC yr-1. Land and ocean sinks were stable or grew.

Regarding the methane budget, the project found that after over a decade of stable methane concentrations, growth resumed in 2007 and has been growing since then due to increased emissions from wetlands and the combustion of fossil fuels.

In November, the Global Carbon Atlas was launched, becoming one of the major interfaces between GCP research products and three very distinctive audiences: outreach (general public); emissions (policymakers, NGOs and the corporate world); and research (the scientific community with model and other flux and pool carbon data.) The Atlas received 25,000 unique visits during the first week after the launch.

Global Carbon Project

The Global Carbon Project (GCP) aims at developing a comprehensive policy-relevant understanding of the global carbon cycle, encompassing natural and human dimensions at their intersections. The Tsukuba International Office is mainly focused on Urban and Regional Carbon Management (URCM), which is a place-based and policy-relevant scientific initiative aimed at promoting sustainable, low-carbon, and climate-resilient urban development.

"Health is a key goal of the green economy. Health benefits can be achieved through eradicating poverty, improving food security, sound water management, universal access to green energy services, sustainable cities, and greater resilience and disaster preparedness. Scientists must receive support in providing the evidence base for good environmental decision–making."

GECHH SSC

Global Environmental Change and
Human Health

Global Environmental Change and Human Health Project

The primary goals of the Global Environmental Change and Human Health (GECHH) Project involve identifying and characterizing health risks due to global environmental change; developing, assessing and communicating adaptation strategies; and fostering research training programmes to boost international research capacity. GECHH researchers have worked towards these goals through a series of symposia, publications, and training workshops. Since 2009, GECHH has been an active partner in symposia and student training workshops with the Chinese Academy of Sciences Institute for Geographic Sciences and Natural Resources, bringing together young scientists to examine the issues of health and the environment in mega-cities.

Global Land Project

The Global Land Project (GLP) focuses on the interactions of people and the terrestrial environment. GLP's aim is to measure, model, and understand the coupled human-environmental system as part of broader efforts to address changes in Earth processes and subsequent social, economic, and political consequences.

As part of its synthesis activities, GLP produced a special issue in *Current Opinion in Environmental Sustainability* on "Land System Science: between global challenges and local realities". Moreover, a synthesis workshop on drivers and impacts of land system change was held at SeSync, Annapolis, USA in June, entitled: "Globalizing our understanding of land use change".

A lot of preparatory work was undertaken throughout 2013 for the 2014 GLP Open Science Meeting bringing together large parts of the international research community working on land change issues, synthesizing and discussing the role of the land system as a platform for human-environment interactions, connecting local land use decisions to global impacts and responses. Also in 2013, GLP joined forces with iLEAPS and AIMES to launch "Interactions among Managed Ecosystems, Climate, and Societies" (IMECS) as a cross-project cluster activity to jointly study managed ecosystems.

"Land Use is increasingly important in discussions about climate change, biodiversity, and food security. GLP provides a platform for bringing the different disciplines and researchers together. In 2013, we undertook major synthesis activities, but also looked ahead by identifying the major challenges for Land System Science in the near future."

Peter Verburg, Project Chair

"The decade of global water research has provided clear evidence that while research in the past has emphasized the identification of problems rather than the identification of solutions, a clear shift in emphasis towards solution–oriented approaches is required."

Claudia Pahl-Wostl, Project Co-chair

Global Water System Project

The Global Water System Project (GWSP) supports global assessments of water and the development of adaptation strategies with the appropriate scientific basis. It aims to address how humans are changing the global water cycle, the associated biochemical cycles and the ecosystem function of the global water system, and what the socio-economic and environmental feedbacks arising from these changes are.

Research from GWSP confirms that current increases in the use of water and impairment of the water system are on an unsustainable trajectory. However, current scientific knowledge cannot predict exactly how or precisely when a planetary-scale boundary will be breached. Such a tipping point could trigger irreversible change with potentially catastrophic consequences.

The GWSP conference on "Water in the Anthropocene" in May 2013 elaborated upon the current state-of-the-art in interdisciplinary water research, setting the stage for the next step in the evolution of the global water research agenda. As an output from this international event, the water community made a set of core recommendations in the form of a declaration called "The Bonn Declaration on Global Water Security", calling for joint global action to develop a broad community consensus blueprint for a reality-based, multi-perspective, and multi-scale knowledge-to-action water agenda based on these recommendations.

"IHOPE has seen phenomenal growth over the past year, due in part to our new website ihopenet.org but also due to greater recognition that current human behaviour and activity pose fundamental threats at least as profound as global warming. IHOPE researchers uncover what our past can teach us about building a viable future for humanity."

Carole Crumley, Executive Director

Integrated History and Future of People on Earth Project

IHOPE is a global network of researchers and research projects that link human and Earth system history through the integration of knowledge and resources from the biophysical and the social sciences and humanities. IHOPE's goal is to increase future options for humanity by analyzing experiments in the past to find solutions to contemporary problems and to signal behaviours and activities that are detrimental to both humans and the biophysical systems that support human life.

The umbrella framework of historical ecology offers a holistic, ethical, and place-based approach which can "grow" regional expertise in managing the future. An example is collaboration through IHOPE among the North Atlantic Biocultural Organization (NABO), its sister organization the Global Human Ecodynamics Alliance (GHEA), and the Nordic Network for Interdisciplinary Environmental Studies (NIES). Together, the organizations have constructed a formidable regional network for circumpolar study that stretches from prehistory to the present, exactly the collaborative goals IHOPE wishes to foster. Each entity is autonomous, employs diverse but compatible competencies to take up agreed-upon research questions, embraces several communities of knowledge and practice, and welcomes stakeholders as equal partners in the region's future.

"In 2013, IRG has moved its activities forward by collaborating with more international institutes. Modeling both disaster chains and a disaster risk governance paradigm help scientists and decision–makers better under–stand the complexity of social–ecological systems."

Peijun Shi, Project Co-chair

IRG-Project
[Integrated Risk Governance Project]

Integrated Risk Governance Project

The Integrated Risk Governance Project (IRG-Project) proposes a ten-year international effort in risk research to learn how to deal with risks that exceed current coping capacities. The project focuses on the transitions in and out of the occurrence of relevant risks by combining case study, modeling, and survey methods. It aims to improve our understanding of crises in socio ecological systems and helps to improve practices of integrated risk governance worldwide.

By integrating the research outcomes from various regions, an "early warning-prevention-reconstruction" disaster risk governance paradigm has been established to advance adapting policy, and to increase disaster governance capability under global climate change. Officially recognized as UNISDR's scientific advisory group in 2013, IRG is now working specifically on the role of the government in disaster risk governance. New toolboxes will train students in multidisciplinary ways and assist decision-makers in their daily operation. Working with other international organizations and networks, new research projects, such as Risks of Aging Society under the One Health Framework, have been initiated. The Global Enterprise Consortium, which aims to coordinate the private sectors' efforts in DRR collectively, has received worldwide support and is expected to be launched in 2014.

"2013 has been a year of motivation and achievements for LOICZ, striving for excellence in research, looking for new directions, reorientating and transitioning into the Future Earth. LOICZ has been successful in mapping into the changing research landscape and on-going research initiatives."

Ramachandran Ramesh, SSC Chair

Land–Ocean Interactions in the Coastal Zone Project

The Land-Ocean Interactions in the Coastal Zone (LOICZ) Project is working to support sustainability and adaptation to global change in the coastal zone. LOICZ supports adaptation to global change by linking natural and social sciences with knowledge of coastal communities at global, regional, and local scales. It operates as an international research project and global expert network exploring the drivers and social-environmental impacts of global environmental change in coastal zones.

LOICZ research from 2013 showed that geomorphic classifications for small island types serve as a physical basis for coastal adaptation strategies. Within the Island Hotspot, LOICZ SSC members developed such a classification method for tropical islands. Within the "National Assessment of Shoreline Change" LOICZ scientists developed the "Coastal Sediments Cells", a classification index and crucial component towards an improved shoreline management in India. Further, LOICZ SSC members reviewed the current state of drivers of change in West African coastal watersheds ecosystem goods and services. 2013 also saw an assessment on coastal changes in the Arctic and the publication of the LOICZ-IGBP synthesis "Megacities and the Coast - Risk, Resilience and Transformation", with contributions from regional groups of experts.

Urbanization and Global Environmental Change Project

The Urbanization and Global Environmental Change (UGEC) Project has been instrumental in leading and organizing research efforts towards identifying gaps of knowledge regarding the bidirectional interactions and feedback loops between urban areas and the global environment.

A sampling of UGEC research in 2013 shows: a) Between 1999–2008, CO_2 emissions scale proportionally with urban population size. Contrary to theoretical expectations, larger cities are not more emissions efficient than smaller ones. b) Coupling spatially explicit (consequential) life cycle assessments or material flow analysis with urban metabolism would advance the implementation of the Urban Land Teleconnections concept by helping to identify linkages between specific urban processes and land change. c) Our current understanding is very place based, but needs any understanding of the underlying urban processes and how these processes intersect with other systems (i.e., urbanization as an object of study). d) Although urban greening is less advanced than in other regions, such investment in Africa has the potential to address long-standing development-environment problems, quality of life, livelihood sustainability, mitigating and adapting to climate change. e) Previously undocumented recent and rapid changes in urban areas worldwide reflect pronounced shifts in the form and structure of cities. Further, in 2013 UGEC has been preparing the "Handbook on Urbanization and GEC" – a flagship synthesis product – with chapter contributions from UGEC colleagues.

"2013 has been a great year as the project is now solidly engaged in a number of synthesis activities and publications. This process has been complemented by the happenings of Future Earth which has allowed us to broaden the scope of UGEC and to further advance the urban international research agenda."

Roberto Sanchez Rodriguez, Project Co-chair

"START is proud to contribute to the continuing aims of the Rio+20 meeting report, which states that ['sustainable development] can only be achieved with a broad alliance of people, governments, civil society and private sector, all working together to secure the future we want for present and future generations.'"

Gordon McBean and Hassan Virji

Global Change System for Analysis, Research, and Training

The Global Change System for Analysis, Research, and Training (START) is an internationally recognized NGO promoting research-driven capacity building to advance knowledge on global environmental change in the developing world, especially Africa and Asia-Pacific.

The following are examples of findings and insights from two scoping activities in urban areas undertaken by START and partners in 2013:

- Urban food insecurity is strongly linked to income poverty and exacerbated by poor infrastructure and services.
- Climate change will intensify urban food insecurity by reducing the ability of the urban poor to access income sources for purchasing food, inhibiting movement of food into settlements, and increasing disease burdens.
- The interlinked nature of the food security dimensions requires the development of policy frameworks that encourage interconnected poverty reduction/social protection and rural/urban-linked development approaches, and enhanced governance mechanisms.
- Vulnerability of infrastructure and communities in many cities in Africa cannot be meaningfully tackled without addressing urban poverty.
- Climate information and knowledge must be presented in terms that are accessible to urban planners and the broader public.
- Good governance contributes to building resilience in urban areas by enabling effective and integrated action on climate change by all stakeholders.

INTERNATIONAL START
IHDP • IGBP • WCRP
SECRETARIAT

Photo: UN Photo / Jean-Marc Ferre

"The KLSC Alliance took a significant step forward in 2013 with the addition of two new projects, progress in ongoing projects, and the commitment from the Institute for Advanced Sustainability Science to host a new KLSC website (www.klscproject.org) to be launched in March 2014."

Ilan Chabay, Alliance Chair

Knowledge Learning and Societal Change Alliance

A critical need in the quest for a more sustainable world is deeper understanding of the interplay between knowledge and learning on one hand and behavioural and societal changes on the other. The Knowledge, Learning and Societal Change (KLSC) Alliance puts forward the case for research and actions to understand this interplay in myriad cultures and conditions in the world and to share the developing insights to further enable and facilitate transitions to a sustainable future in policy and practice.

A highlight of 2013 was the addition of two new projects, ClimPol (http://climpol.iass-potsdam.de/), working toward increased coordination between climate and air pollution mitigation strategies, and SMART, examining transformations in the Arctic driven by climate change and by increasing economic activities. In December, the first SMART expert and stakeholder workshop (http://tinyurl.com/Arctic-Horizon-2030-workshop) was held to identify key trends and critical junctures in the Arctic and to refine the SMART research framework. Further, in 2013 KLSC expanded the scope of its research activities and methods resulting in greater geographic, conceptual, and contextual frames among which to compare knowledge production, learning processes, and their relation to behavioural and societal change.

KLSC Knowledge, Learning and Societal Change

"We were able to intensify our work in Asia by participation in the Third Pole Environment workshop in India, and discussions with the Mountain Societies Research Institute of the University of Central Asia and the Russian Academy of Science. We also made solid starts on all of our Concerted Efforts."

Gregory Greenwood, Executive Director

Mountain Research Initiative

The objectives of the Mountain Research Initiative (MRI) are to develop a strategy for detecting signals of global change in mountain environments; define the consequences of these changes for mountain regions as well as lowland systems dependent on mountain resources; and make proposals towards sustainable land, water and resource management at local to regional scales. MRI operates via regional and thematic networks, global initiatives, networking and synthesis workshops and Concerted Efforts.

MRI's core areas in 2013 included networking at the global level to strengthen the community of global change in mountains researchers by initiating contacts and organizing "Key Contact Workshops" at major scientific meetings; enhancing the profile of global change research in mountains by contributing to the strategic development of the Mountain Partnership, the World Mountain Forum, and the Earth System Science Partnership; networking at regional levels through regional programmes and coordinators catalyzing cooperation on proposals and research. In 2013 MRI supported the following regional networks: MRI Europe and its sub-networks for the Carpathians and South Eastern Europe, AfroMont, and the Transecto Cordillera Americana. The success of the Swiss-Austrian Mountains Days in Austria proved the importance of the regional level.

"In 2013 we successfully advanced scientific analysis and dialogue in the population–environment research community. Highlights were two cyberseminars that provided fundamental insights and excellent discussions on new, highly relevant topics for both science and policy."

Diana Hummel, SSC Chair

Population–Environment Research Network

The Population-Environment Research Network (PERN) seeks to advance academic research on population and environment relationships. It is an internet-based network promoting open and free scientific exchange among researchers from social and natural science disciplines worldwide. In 2013, network membership grew to more than 2,000 researchers from around the world. PERN's activities include the collection and annotation of gray literature, recent publications, and syllabi in an online database, hosting cyberseminars and the provision of information on meetings, grant and job opportunities and member research.

During 2013, PERN held two cyberseminars on topics related to global climate change with over 600 participants. The first one was dedicated to the new parallel modeling paradigm designed for IPCC's Fifth Assessment Report, the shared socioeconomic pathways (SSPs), and succeeded in raising awareness in the population-environment community of the role that researchers can play in helping to develop SSP scenarios. The second one, co-hosted by PERN and the United Nations University-Institute for Environment and Human Security (UNU-EHS), focused on UNFCCC's new work programme on Loss & Damage from Climate Change and aimed to clarify the different meanings of "loss and damage" and their possible implications for both research and policy.

Photos: UN Photo Jean-Marc Ferre

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Land–Ocean Interactions in the Coastal Zone Project (LOICZ)

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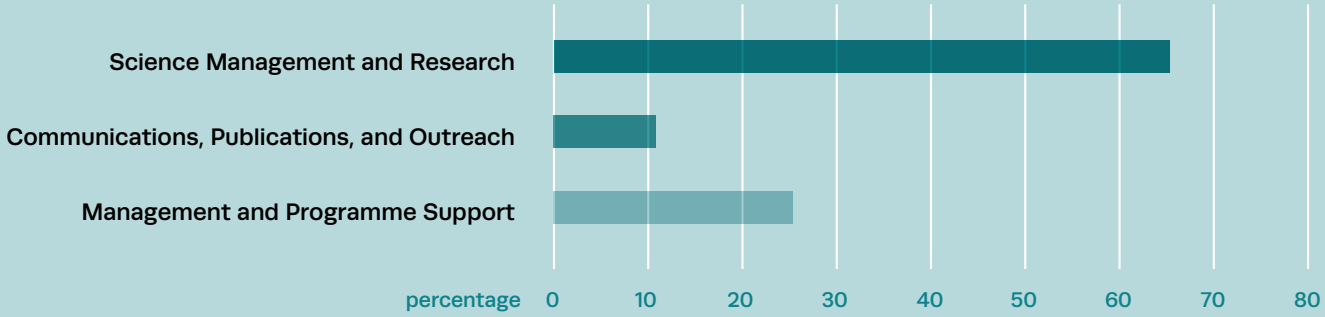
FINANCES

The IHDP Secretariat is mainly funded by the German Ministry of Education and Research (BMBF), the National Science Foundation (NSF) and by national contributions. In 2013, IHDP also received funding from the United Nations Environment Programme (UNEP) and from the Secretariat of the Convention on Biological Diversity (SCBD). These additional contributions were used for the work on the Inclusive Wealth Report 2014 and for the preparation of a background report for the Trondheim Conference on Biodiversity, which took place in 2013.

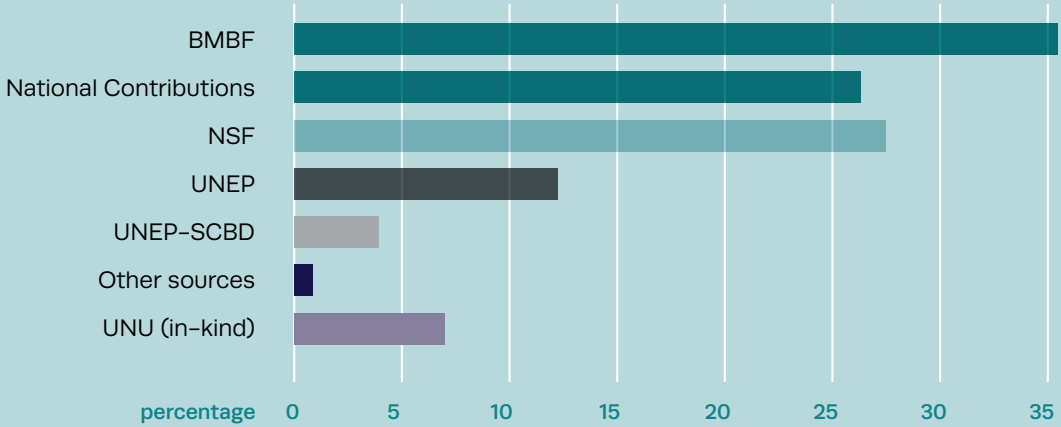
Compared to the previous year, the overall expenses slightly decreased. The largest share of expenses was made in the field of Science Management and Research. Around 20 per cent of the budget for science and research was directly forwarded to the research network through annual project grants.

Due to the efficient use of the available budget and a reserve accumulated over the past years, the year 2013 closes with a positive cash balance of approx. US$190,000.

Expenses 2013



Income 2013



Income 2013

Carry-forward from 2012	$107.000
BMBF	$398.559
National Contributions	$229.513
NSF	$236.000
UNEP	$107.209
UNEP-SCBD	$41.000
Other Sources	$10.150
UNU (in-kind)	$70.000
	$1.199.431

Expenses 2013

Science Management and Research	**$649,214**
Academic and Project Staff	$368.992
Grants IHDP Core and Joint Projects	$129.200
New Scientific Projects and Initiatives*	$70.881
Meetings, Conferences and Strategic Traveling	$80.141
Communications, Publications, and Outreach	**$101,654**
Communications Staff	$76.859
Publications and Other Communication Tools	$24.794
Management and Programme Support	**$257.080**
Management and Programme Support Staff	$131.307
General Office Costs	$5.312
UN Campus Facilities (incl. UNU in-kind contribution)	$120.461
TOTAL	**$1,007.948**

* Thereof more than 90% financed by external project sourced funds.

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