IASS WORKSHOP SUMMARY

Institute for Advanced Sustainability Studies (IASS)

Planetary Health: Scoping the German Research Landscape

Potsdam, August 28, 2019

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IASS POTSDAM

Workshop Summary

The Workshop “Planetary Health: Scoping the German Research Landscape,” hosted by the Institute for Advanced Sustainability Studies (IASS), took place in Potsdam, Germany, on August 28, 2019.

The event was convened to explore the theme of Planetary Health, which refers to the idea that the health of the planet and the humans that are part of it are inextricably intertwined. Planetary Health is a topic that naturally cuts across boundaries of traditional academic disciplines. It is directly relevant for climate-resilient development issues such as air quality, nutrition and food security, water safety and security, and vector-borne diseases. The concept of Planetary Health has attracted widespread interest recently, with examples including the Lancet Countdown: ‘Tracking Progress on Health and Climate Change’, as well as the recently-released sixth Global Environment Outlook (GEO6) report ‘Healthy Planet, Healthy People’.

Following an intense day of interdisciplinary dialogue on the topic of Planetary Health, this workshop summary provides a record of the most important themes and discussions that took place. It can be used to inspire future conversations and collaborations around a rapidly evolving field.

Contents

1. Concept of Planetary Health: Definition and Debates

Attendees shared a common, albeit imprecise, idea of what is meant by the term "Planetary Health." At the end of the workshop there was a general consensus that more work to sharpen the definition of the term would be useful.

Workshop participants generally agreed that Planetary Health is characterized by the following attributes.

- Planetary Health is the health of human civilization and the state of the natural systems on which humans depend, and focuses on the connections between the two.
- Planetary Health is a deliberately broad concept, which lies at the intersection between health sciences and natural and social sciences.
- Planetary Health is interdisciplinary and cross-cutting, and requires us to move beyond siloed thinking.
- Planetary Health emphasizes global, environmental and social drivers of human health.
- Planetary Health represents a "systems thinking" approach. This is in contrast to operating according to a paradigm of linear thinking and direct relationships.

Most workshop participants shared the view that at the core of the Planetary Health concept is the need to rethink, reframe and better communicate our (human) relationship to the environment, with the recognition that humans are part of the ecosystem rather than being outside of it.

Discussions at the Workshop focused primarily on the connections between the impacts of climate change and human health. Topics identified as important to Planetary Health but underrepresented in the Workshop included biodiversity, circular economy, mental health, nature-based solutions, environmental justice, and issues of equity, particularly relating to the global south.

Many workshop participants felt that the concept of Planetary Health is not necessarily new but an extension of previous efforts, notably EcoHealth and OneHealth.

Participants also inquired whether Planetary Health could be considered a communication tool or "slogan," or whether it refers to a scientific discipline. Sometimes the term "Planetary Health" was used to refer to a social movement in support of human and ecosystem health. Another challenge raised by workshop participants was whether we use the concept of Planetary Health for funding and/or communication purposes, or whether it could represent a theoretical framework.

2. Challenges and research needs in the field of Planetary Health

A central challenge of Planetary Health research is understanding complex relationships within and between social and ecological systems. Within this broad context several specific research needs were identified.

Participants underscored the importance of improving our understanding of basic relationships in complex systems, and then improving our models to represent this complexity. Workshop participants pointed out the pitfalls of "just change one thing" (single parameter variation) modeling approaches, i.e., changing one variable and looking at the consequences while all of the other external conditions stay the same. It is problematic, for example, to calculate future climate change-related health impacts without also taking into account that the population demographics are changing as well – not just the climate. Addressing this problem requires better incorporation of complexity into our modeling, and also better communication when we do use single parameter variation modeling as a space for experimentation: researchers need to make clear that such model simulations do not represent a prediction of a future reality. Some participants believe that health risks due to climate change are underestimated in current modeling practice, e.g., the risks due to the spread of vector-borne diseases.

Workshop participants also identified the potential for mutual learning via increased exchange between the health and climate communities. For instance, the use of the metric "wet bulb temperature" to calculate health impacts within the climate community was identified as problematic from the perspective of health experts, given its theoretical underpinnings and the origin of the metric.

The rate of environmental change and the rate of change in the spread of diseases were identified as a further research gap, recognizing that the speed at which change occurs affects the ability of humans and ecosystems to respond. The same considerations apply for thresholds and tipping points. Additional neglected topics identified by participants include how rising CO2 concentrations are reducing the nutritional quality of major cereal crops, the role of soils and crop varieties on the micronutrient content of our food, and how agroecological methods can contribute to climate change mitigation, nutrition, and health. Participants also identified a need for better integration of health concerns and impacts within the context of development pathways, and a better understanding of how different climate adaptation and mitigation pathways shape societies into more or less desirables states.

A further research gap was identified around quantification and economic valuation. Workshop participants considered it important to quantify the health impacts of global environmental change and the potential impact of solutions. This is directly related to the community's ability to quantify and communicate the health co-benefits of climate and other policies. Several participants also pointed to a need for more economic analysis within the field of Planetary Health. This includes estimating the costs of action, the costs of inaction, and the costs of residual risks. It was also suggested that the development of ways to quantify and communicate value that can provide alternatives to metrics like GDP would be valuable for Planetary Health.

2.1 The implementation challenge

Participants felt that in the area of Planetary Health a large implementation gap exists, i.e., a gap in the implementation of policies and actions that support the health of humans and ecosystems. The majority of participants also emphasized the need for closing the implementation gap via education, research, policies, and good governance. Holistic approaches and flexibility to adapt solutions to different contexts were seen as important to implementation. Here participants also emphasized that closing the implementation gap requires a complex system-based approach, i.e., solutions that are more than just the sum of individual actions. The implementation gap is an area where there needs to be a significant increase in research. There is a particular need for research in the area of behavioural and implementation sciences to explore what could work to close the implementation gap. Another important area for enquiry is the organisational culture and structure, including the reward system, of academic research. The current arrangements appear to encourage disciplinary working as opposed to enhancing integrated, transdisciplinary and interdisciplinary approaches.

Another area where a research need was identified is in the evaluation of policies and programs. The general observation was that there is very little research on the effectiveness of policies in general, and of synergistic health-environment projects in particular. Research questions that should be prioritized include "What policies and intervention approaches have worked, under what conditions, and why?" and "What political strategies work?" An understanding and awareness of best practices and examples – i.e., what Planetary Health-related policies have worked and under what conditions – was identified as important. In this way insights from past experiences can be used to design, implement, and monitor interventions to improve current and future health while safeguarding natural systems. The development of metrics for evaluating the effectiveness of policies and projects was also identified as a research need.

The implementation challenge also highlights the role of politics, and points towards needs for research and understanding in the realm of political science in order to achieve Planetary Health goals. Several workshop participants see a need to develop political strategies for engagement and change, and others pointed out the need to be aware of power dynamics in order to effect change. One concrete approach suggested was to link Planetary Health (research and action) to the SDGs and the transformative sustainability research agenda, and to implement health as a "basic principle" within UN institutions.

2.2 The funding challenge

Funding is one requisite for implementation, and workshop participants were in agreement that funding for Planetary Health activities, both research and action, are insufficient. It was also pointed out that funding challenges are directly linked to the challenges in the realm of politics and power dynamics. Workshop participants shared that while the Green Climate Fund (GCF) has hired a health specialist, the theme of health remains marginalized within the institution. More attention has been given to large infrastructure projects, for example. The importance of country involvement to getting

funding within the climate space was also stressed. This could include health-related work in support of countries' National Adaptation Plans and Nationally Determined Contributions under the UNFCCC. Workshop participants expressed the wish that development aid be better linked to environmental protection, and that more funding be dedicated to cross-sectoral and holistic approaches.

2.3 The inter- and transdisciplinarity challenge

One of the defining characteristics of the Planetary Health concept, as understood by workshop participants, is an inter- and transdisciplinary approach, requiring cross-sectoral collaboration between academic disciplines as well as beyond academia, to work with policymakers, NGOs, industry, and more. However, putting this approach into practice was one of the challenges identified in Planetary Health research. Participants identified the need for more dialogue and collaboration between the different research communities – including the fields of health, climate change, human geography, urban planning, economy, political science, and more. Transfer of Planetary Health concepts into education was also seen as fundamental.

Related to the inter- and transdisciplinarity challenge, workshop participants identified a need to develop methods for evidence synthesis across disciplines. Here it was suggested that new methodologies could play a role in moving beyond single case studies to making meaningful meta-analyses, involving big data, and in making the most of the health data that is already available, such as census data and panel studies.

3. Communication around Planetary Health

Within the workshop, there was much discussion about ways that the concept of Planetary Health could be used as a communication opportunity. However, preferences and ideas about how to communicate on the topic of Planetary Health were very diverse. There was a general consensus that communication on Planetary Health is very important, but that a lot of work still needs to be done on what narratives work best, and for which audience. Many were in favor of communicating with positive messages, for instance, how adding more local fruits and vegetables to our diet and cycling more often benefits our personal health and the health of the planet.

One usage of the term "Planetary Health" is to present "patient Earth" as a metaphor for the impacts of climate change and environmental degradation on the earth system. Such an approach often begins by making statements like "the Earth has a fever and belongs in the intensive care station." The idea behind the "patient Earth" framing is that it is a simple and relatable way to talk about climate change with non-experts or other not-yet-engaged audiences. However, some participants find this metaphor problematic because they feel it implicitly portrays humans as the "saviors" without pointing out that humans are the perpetrators of the environmental harm (though not all participants agree that the "patient Earth" metaphor needs to be interpreted this way).

Another suggested communication approach was in making a comparison between climate change and a medical emergency, and challenging people to respond accordingly. For instance, comparing the climate crisis to Ebola and asking: if Ebola were at our doorsteps, how would we respond? Presumably with an urgency and speed far greater than how we are collectively responding to the climate crisis. Along the same lines, one could compare the Planetary Health crisis to a serious diagnosis in the family which totally shifts all priorities.

One discussion thread at the workshop was the role of health professionals (doctors, nurses, allied health professionals) as trusted communicators. Health professionals benefit from a high level of trust from patients, and information communicated by doctors and nurses is ascribed more validity and importance than from many other professions. It was also suggested that health professionals are far better equipped for having courageous conversations than the average person, and that courageous conversations are needed on the topic of climate and the so-called great transformation. One maxim ascribed to health professionals is to keep the description of diagnosis of the problem short, and to spend more time talking about solutions. Some workshop participants found this a useful approach when talking about Planetary Health and the climate crisis (i.e., introduce the problem but spend the majority of the time talking about solutions).

4. Conclusions

The meeting was concluded by asking each participant to share their impressions and ideas regarding further collaboration. All participants acknowledged the usefulness and unique opportunity of the workshop, which brought together people with various backgrounds and expertise all working around Planetary Health. It was acknowledged that this approach would be useful in further pursuing work on the topic and in embracing a holistic approach towards addressing challenges associated with Planetary Health. Participants agreed that apart from advocating and working within their own surroundings around the issue, the workshop was useful in terms of networking and opening avenues for further collaboration. Such collaboration can include participation in each other's events, openness for joint academic work, and viewing and presenting Planetary Health to a broader audience from different perspectives. As a direct result of this meeting, a number of the participants have continued to collaborate and drawn upon this experience to inform their input in to subsequent planetary health events. Participants agreed to share their contact information and confirmed their interest to contribute to the joint report of the meeting.

5. About the authors

Dr. Kathleen A. Mar

leads the group Climate Action in National and International Processes (ClimAct) at IASS. Working at the interface of science and policy, her career began with a focus on improving air quality for human and environmental health. Her current work focuses on the synergies and interactions between climate, air quality and Planetary Health. She holds a Ph.D. in atmospheric chemistry from the University of California, Berkeley and worked at the United States Environmental Protection Agency (US EPA) prior to joining the IASS.

Dr. Kathryn Bowen

is an Hon. Associate Professor at the Fenner School of Environment and Society, a Senior Fellow at the Research School of Population Health, and an Affiliate Scholar at the IASS. Kathryn works at the nexus of global environmental change, global health and governance issues primarily in low and middle-income settings. She holds a PhD (ANU), MSc (International Health) (Humboldt & Frei Universities, Berlin) and BA/Psyc (Hons) (Newcastle). Kathryn holds a number of key international roles, including as a Lead Author on the Intergovernmental Panel on Climate Change (IPCC) 6th Assessment Report, a member of the Science Committee of the World Adaptation Science Program; a member of the Steering Committee of the Future Earth Health Knowledge Action Network (Health KAN), and a member of the Planetary Justice Taskforce as part of the Earth System Governance network. Kathryn regularly advises the World Health Organization (WHO) on climate change and health, as well as other national and international organisations.

Dr. Mariam (Maka) Maglakelidze

is a public health professional whose primary interests in the field are non-communicable diseases, the impact of environmental factors on them, and the concept of Planetary Health that explores these inter connections. Most recently she was a Fellow at the Institute for Advanced Sustainability Studies (IASS) in Potsdam, and a Guest Scientist at Charité – Universitätsmedizin Berlin, doing a research on the association on Asthma and COPD exacerbation in relation to outdoor air pollution in Berlin, Germany. Mariam has a Ph.D. in Pulmonology from Tbilisi State Medical University and Masters degree in International Health from Charité – Universitätsmedizin Berlin. Her research track covers studies on respiratory health. Mariam has worked in various projects of international organisations (UNFPA, European Cervical Cancer Association, UNICEF, ICRC) governmental health institutions (National Center for Disease Control and Public Health of Georgia, City Service of Health and Social Affairs of Tbilisi) and NGOs. She gained experience in building dialogues between stakeholders within Georgia and with international partners. Throughout her work she conducted a number of advocacy events and raised funds for charity in healthcare. Mariam Maglakelidze represents Georgia within the WHO initiative Global Alliance against Respiratory Diseases (GARD). She has been a guest lecturer on Air Pollution and Health, at University of Potsdam, Faculty of Mathematics and Natural Sciences, Geoecology Department.

Dr. Nicole de Paula

is the first Klaus Töpfer Sustainability fellow at IASS. With more than a decade of experience, she has been globally connecting policymakers and researchers to create a public understanding on key issues related to sustainability, environment and public health. She holds a Ph.D. in International Relations from Sciences Po Paris and has been consulting with several international organizations under the UN system on themes related to climate change, biodiversity, ocean governance, innovative finance and the Agenda 2030 for Sustainable Development. As a Planetary Health advocate, she champions the socioeconomic advancement of women through environmental conservation and public health policies to make the 2030 Agenda for Sustainable Development a reality by 2030. She is the founder of the Women Leaders for Planetary Health and is currently co-organizing the global meeting of the Planetary Health Alliance, to be held in Brazil in April 2021 at the University of Sao Paulo. Originally from Brazil, Nicole has lived in France, the US, the UK, Thailand and Germany.

6. Appendix: List of Conference Attendees

Name	Affiliation(s)	Discipline(s) and Expertise	Email
Christine Bindal	IASS	Environmental ethics	christine.bindal@iass-potsdam.de
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Michael Palmer	IASS	Governance for Sustainable Development	michael.palmer@iass-potsdam.de
Sina Ribak	co-embracing natures	Ecologies and the Arts	sina.ribak@gmail.com
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Luzie Verbeek	Robert Koch Institut (RKI)	Medicine, global health, education	VerbeekL@rki.de

Institute for Advanced Sustainability Studies e.V. (IASS)

Funded by the ministries of research of the Federal Republic of Germany and the State of Brandenburg, the Institute for Advanced Sustainability Studies (IASS) aims to identify and promote development pathways for a global transformation towards a sustainable society. The IASS employs a transdisciplinary approach that encourages dialogue to understand sustainability issues and generate potential solutions in cooperation with partners from academia, civil society, policymaking, and the business sector. A strong network of national and international partners supports the work of the institute. Its central research topics include the energy transition, emerging technologies, climate change, air quality, systemic risks, governance and participation, and cultures of transformation.

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August 2019

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DOI: 10.2312/iass.2020.005

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