

## Planetary Health: What is Planetary Health? – The Concept and Future Challenges

### Prof. Chiho Watanabe

Professor, School of Tropical Medicine and Global Health, Nagasaki University; Executive Advisor to the President (Planetary Health)

We hosted Prof. Chiho Watanabe (Professor, School of Tropical Medicine and Global Health, Nagasaki University; Executive Advisor to the President (Planetary Health)) for a lecture on the concept of planetary health, its background, domestic and global trends in this field, and what we can do to help achieve better health for our planet.



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### Key points of the lecture

- Planetary health has been the subject of growing attention in recent years. Behind this growth is the scientific understanding that human activities during and after the Industrial Revolution have started to have significant effects on the Earth's climate and ecosystems, which have resulted in both direct and indirect human health impacts. Some have proposed naming this epoch the "Anthropocene" to denote the beginning of a new geological era in which the effects of humans have become observable on a global scale.
- Planetary health is a framework for research and implementation that is based on the view that the Earth's health (or that of its ecosystems) and human health (and civilization) are interdependent. While planetary health has many points in common with the Sustainable Development Goals (SDGs), we can also say the concept of planetary health emphasizes the relationships among each of the seventeen SDGs.
- In recent years, there has been growing momentum for planetary health at global organizations and universities in Japan and overseas. Nagasaki University, for example, started a university-wide initiative for planetary health in 2020 that aims to develop leaders who will be able to address the issues of today through interdisciplinary collaboration. Also, an increasing number of domestic organizations are joining the Planetary Health Alliance (PHA).
- We should respond in a manner that surpasses countries and disciplines to achieve planetary health. Existing guidelines for action and attitudes such as the three pillars for institutions outlined by Professor Tony Capon of Monash University in Australia as well as the São Paulo Declaration on Planetary Health will be helpful references for us in the future.

### ■ The background of planetary health and the Anthropocene

There is various data including the results of the Millennium Ecosystem Assessment (2000-2005) conducted in response to calls from the United Nations which demonstrate that, since the beginning of the Industrial Revolution, humanity has obtained a "Healthy Human Society" as a trade-off for burdening the environment. Looking at the classifications used to name different geological epochs in Earth's history, the current epoch is the Holocene. However, some have called for renaming the era starting in the year 2000 the "Anthropocene" in recognition of the fact that human activities have started to have severe effects on the Earth's environment and ecosystems. If we do not act to counter these effects, carbon dioxide and other greenhouse gasses will continue to build up and global temperatures will continue to rise.

### ■ What is planetary health?

Planetary health is a combination of the health of the Earth (and its ecosystems) and the health of humanity (and civilization). These two are not separate entities – rather, they are interdependent, and planetary health emphasizes achieving good human health for the latter through wise stewardship of the former.

The concept of planetary health was first introduced by a team of about twenty researchers in medicine, public health, biodiversity, and conservation ecology who published a paper in The Lancet in 2015, titled "Safeguarding human health in the Anthropocene epoch: report of The Rockefeller Foundation-Lancet Commission on planetary health." Based on existing frameworks and ideas for sustainability, that paper advocated for the importance of balancing the environment, economy, and society. It also recommended expanding interdisciplinary research and building a system of governance that surpasses both sectors and scales and finds solutions by combining forms of surveillance across fields like the environment, socioeconomics, and health.

The planetary boundaries discussed in the paper mentioned above are one of the key concepts to consider for the environmental issues of today. The boundaries identify nine areas of global sustainability and include climate change, biosphere integrity, and ozone layer depletion. To date, they have been updated once. The sole focus of the concept is Earth's sustainability, however, so they do not treat human health as a primary concern. In light of this, there is also a school of thought that combines the planetary boundaries with the concept of social boundaries, which indicate the minimum amounts of life's essentials like water, energy, health, education, and equity needed to provide a foundation for society. These concepts can be used to portray the areas of human activities using the Doughnut model, with the outer, larger circle representing planetary boundaries and the inner, smaller space representing social boundaries.

One of the most frequently-asked questions about planetary health is, "Aren't they identical to the SDGs?" The seventeen SDGs can be sorted into three categories and arranged into three tiers like a wedding cake, with the bottom representing the biosphere, the middle representing society, and the top representing the economy. Discussions on sustainability often only focus on one layer. However, to maintain sustainability for "human health" in the top layer, it is necessary to simultaneously maintain sustainability for "planetary health" at the bottom layer. While planetary health and the SDGs share many points in common, planetary health places its focus on synergies, trade-offs, and other relationships among each of its objectives. In addition, planetary health looks to achieve sustainability past 2030, the target year of the SDGs.

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### ■ Global trends

Global activities for planetary health have become much more vigorous in the past few years. Planetary Health Week, an event in April 2021 organized by the Planetary Health Alliance led by Harvard University, saw over 4,000 people from over 100 countries register and participate. The São Paulo Declaration was released later that year, in October. It calls on all stakeholders (including various professionals, companies, and nations) to collaborate on achieving planetary health. Then, in December 2021, a biomedical research foundation based in the UK called the Wellcome Trust named "climate and health" as the new, third pillar of its activities, alongside infectious diseases and mental health.

In 2021 and 2022, there were various actions taken for planetary health by global organizations. The Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report Working Group I contribution was presented in August 2021 and stated, for the first time, "It is unequivocal that human activities have heated our climate." That same month, the Unleashing Science report from the International Science Council (ISC) recommended reforming science systems and budgets for sustainability. In December 2021, the United Nations Environment Programme (UNEP), which specializes in the environment, joined discussions on the concept of One Health held by the World Health Organization (WHO), Food and Agriculture Organization of the United Nations (FAO), and the L'Office international des (OIE) to redefine the concept of One Health.

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### ■ University-wide initiatives for planetary health are currently underway at universities in Japan and abroad

Given the growing amount of attention being placed on planetary health, a number of universities have launched university-wide initiatives in this area. For example, at around the same time the Lancet report was published in 2016, the Planetary Health Center of Expertise was established within the University of California Global Health Institute (UCGHI), an organization for university-wide collaboration. The Center is engaged in activities for research and education and is advancing a variety of initiatives for both, through collaboration across campuses. Those initiatives include a long-term field training program that involves medical students and students from other graduate courses.

In its campus-wide action plan for 2020 to 2023, Nagasaki University is also promoting planetary health. Nagasaki University will open its Interfaculty Initiative in Planetary Health in October 2022. It aims to identify issues facing the environment, economy, and society and to educate leaders who will have the capacity to generate solutions through interdisciplinary collaboration spanning areas like global health, economics, engineering, and global humanities. To achieve that, the Initiative is advancing projects that transcend academic departments and disciplines and has established a competitive funding program, a scholarship system, and other such programs. It is also actively taking part in international collaboration. These initiatives include joining the Planetary Health Alliance (PHA); implementing the Planetary Health Report Card, a tool which was developed to build awareness and foster a sense of responsibility for planetary health during education at medical schools; and producing a Japanese translation of the São Paulo Declaration drafted during the 2021 Planetary Health Annual Meeting.

## ■ What we can do to achieve planetary health

Professor Tony Capon, who serves on the International Advisory Board of The Lancet, has identified three pillars for achieving planetary health, namely (1) be conscious of the Earth and all its biospheres; (2) be conscious of future generations; and (3) use systems thinking.

To summarize the first pillar, if our focus is only on regions, it will only lead to conflicts of interest; and if our focus is only on the planet, vulnerable regions will collapse and disparities will widen. Furthermore, concrete actions do not come into view unless we think of the unique characteristics of every region in the world in addition to the whole Earth. The second pillar is related to our awareness of the transition from a problem-solving-based approach (our current approach) to an approach based on foreseeing issues and properly structuring society (the approach for the future). The third pillar is what makes the first two possible. In modern times, we often attempt to solve problems by utilizing models based on hypothetical causal relationships derived through empirical observation. However, to address issues that transcend time and space, we must transition to models based on the various processes which determine the behavior of entire systems. Planetary health research includes modeling multiple pathways through which changes in the environment lead to health effects, which makes systems thinking important. People often ask me, “What actions can I take as an individual?” To answer this question, Albert van Jaarsveld of the International Institute for Applied Systems Analysis (IIASA) said that sustainability is ultimately a human issue, and we require change in order to build a world that upholds dignity. To make that change, he proposes people to ask themselves the following six questions, which are fewer and more simplified than the SDGs, to examine their daily lives.

- Have I been involved in education (that contributes to sustainability)?
- Did I pay attention to fairness?
- Did I work to achieve a circular economy (through consumption, transportation, etc.)?
- Did I try to produce less carbon?
- Did I respect the biosphere?
- Did I make effective use of digital technology?

Calls have also been issued to society as a whole, such as in the São Paulo Declaration, and local governments and ministries have undertaken efforts to declare that climate change is a crisis. Regarding the situation facing climate change, as shown by examples in which one person speaking out led to large-scale demonstrations and similar civil movements, it is also clear that expressing one’s awareness toward climate change as a problem is extremely important.

Finally, I would like to propose an “Eastern model” of planetary health. Just like the current model, such a model would consider planetary health as a concept in which we attempt to achieve human health through “wise stewardship” toward the Earth’s health, and the direction in which we encourage humans to work with nature would not change. I think we must also set a direction in which we aim to create “a human society that is adapted to nature.” I think that introducing an Eastern point of view to the concept of planetary health, which is driven by Western thinking, can contribute to solving the issues we face. While it is a paradox, if we want to sustain a society that focuses on humans, we must leave the concept of anthropocentrism behind.

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## Overview

Date & time: Monday, September 5, 2022; 19:00-20:30 JST

Venue: Zoom Webinar

Language: Japanese

Participation Fee: Free

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## Profile

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University of Tokyo Graduate School of Medicine from 2005 to 2017, as President of the National Institute for Environmental Studies from 2017 to 2021, and assumed his current position in 2021. He has been named Professor Emeritus of the University of Tokyo and is a Doctor of Health Science. His other positions include or have included President, Japanese Society of Health and Human Ecology (2017-present); Chairman, Society of Environmental Science (2021 -present); Associate Member, Section II, Science Council of Japan; former Third Vice President, Society for Human Ecology; and former Chair, Human Ecology Section, Ecological Society of America.

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