







A NAGASAKI Planetary Health Expert Meeting

From COP27 and COP15 to the G7 Hiroshima Summit

New Partnerships for Solving Climate, Environment, Biodiversity and Health Issues

Jointly hosted by: Nagasaki University & Health and Global Policy Institute (HGPI)







HGPI Health and Global Policy Institute

A NAGASAKI Planetary Health Expert Meeting













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About A NAGASAKI Planetary Expert Meeting

[Date & Time]	Friday, May 12th, 2023; from 15:00 to 18:00 (opening time: 14:45) (JST)
[Format]	Hybrid format (In-person & Zoom webinar)
[Venue]	Bunkyo Sky Hall, Nagasaki University (1-14 Bunkyo, Nagasaki City, Nagasaki Prefecture)
[Languages]	Japanese and English (with simultaneous interpretation)
[Jointly hosted by]	Nagasaki University, Health and Global Policy Institute (HGPI)
[Supported by]	University of Tokyo, National Institute for Environmental Studies, Institute for Global Environmental Strategies (IGES), Japan Medical Association, Ministry of the Environment, Nagasaki Prefecture, Nagasaki City
[Sponsored by]	Wellcome Trust, AstraZeneca K.K., Takeda Pharmaceutical Company Limited

15:00-15:05	Opening remarks	Kiyoshi Kurokawa (Chairman, HGPI)
15:05-15:25	Keynote lecture 1	Forging New Partnerships to Bring Health to the Heart of Climate Action Alan Dangour (Director of Climate and Health, Wellcome Trust)
15:25-15:30	Video message 1	Sustainable Markets Initiative (SMI) Activities Pam Cheng (Executive Vice President of Global Operations and IT, Chief Sustainability Officer at AstraZeneca)
15:30-16:25	Panel discussion 1	How the International Community Should Address Climate Change to Solve the Urgent Health Challenges of Today
		Panelists Alan Dangour (Director of Climate and Health, Wellcome Trust) Masahiro Hashizume (Professor of International Health Policy, School of International Health, Graduate School of Medicine, University of Tokyo) Keisuke Nansai (Director, Global Resource Sustainability Research Section, National Institute for Environmental Studies) Maria Neira (Director, Department of Environment, Climate Change and Health, World Health Organization) Juliette White CBE (Vice President Global SHE and Sustainability, AstraZeneca) Moderator : Joji Sugawara (Vice President, HGPI)
16:25-16:30	Recess	
16:30-16:50	Keynote lecture 2	Cross-Disciplinary Efforts to Contribute to Planetary Health Shigeru Kohno (President, Nagasaki University)
16:50-16:55	Video message 2	Initiatives in the Field of Biodiversity and Environmental Pollution Kazuhiko Takeuchi (President, Institute for Global Environmental Strategies (IGES))
16:55-17:50	Panel discussion 2	Planetary Health: Comprehensive Perspectives on Measures Japanese Society Should Take Panelists Fumiko Kasuga (Future Earth Global Hub Director - Japan / Professor, Nagasaki University School of Tropical Medicine and Global Health, Interfaculty Initiative in Planetary) Tony Capon (Director, Monash Sustainable Development Institute, Monash University) Makoto Haraguchi (Fellow, MS&AD InterRisk Research & Consulting, Inc. / TNFD dedicated SVP, MS&AD Insurance Group Holdings, Inc.) Hiroya Yamano (Director, Biodiversity Division, National Institute for Environmental Studies) Mocko Voshitomi (Deputy Director Office of Global Health Congention Interrational Affairs Division Ministry and Welfare (Deputy Director)
		Director, Water Supply Division, Pharmaceutical Safety and Environmental Health Bureau/ International Affairs Team, Novel Coronavirus Response Headquarters) Moderator: Chiho Watanabe(Dean, Interfaculty Initiative in Planetary Health; Professor / School of Tropical Medicine and Global Health, Nagasaki University)
17:50-17:55	Recess	
17:55-18:00	Closing remarks	Margaret Tongue (Minister-Counsellor for Economic Affairs, the British Embassy in Tokyo) Kozo Akino (Member of the House of Councillors; State Minister of Finance)

About A NAGASAKI Planetary Expert Meeting

In 2015, the Rockefeller Foundation–Lancet Commission on planetary health acknowledged that human health and the health of the planet are interconnected, and human civilization depends on human health and flourishing natural systems and the wise stewardship of those natural systems. Furthermore, many studies like those conducted by the Lancet Countdown, published by the Wellcome Trust and the Lancet, have reported that climate change and global warming are already affecting human health negatively in Japan and around the world. Both global climate change and changes in environment and biodiversity impact human activities, work environments, health, and social welfare. To address this global emergency, studies must be conducted in each region, and action must be taken based on these findings.

In the international community, topics related to climate and health have been major parts of discussions held at global meetings like the G7 and the 27th Conference of the Parties to the United Nations Framework Convention on Climate Change (COP27). The G7 Health Ministers' Communiqué, which was released at the G7 Summit held in May 2022 in Germany, also emphasized that "climate protection equals health protection." The topic of climate change and health was also included in the Foreign Ministers' Communiqué; the Development Ministers' Communiqué; and the Climate, Energy and Environment Ministers' Communiqué. A call to place health at the center of measures for climate change was issued at COP27, and the COP27 Health Pavilion was established centered around the World Health Organization (WHO). This major movement is now gaining momentum through actions like the formulation of the "COP27 Health Community Policy Recommendations," which were presented by organizations engaged in global health ahead of COP27. At COP27, the discussion ran into difficulties and concluded after being extended for two days. These discussions on climate and health produced some achievements, such as the inclusion of the right to a clean, healthy, and sustainable environment in the agreement that was formed. The COP26 Health Programme adopted in 2021 at COP26 in Glasgow, U.K., also included commitments to achieving climate health systems, sustainable low-carbon health systems, and health system with net zero emissions. This momentum led to the establishment of the Alliance for Transformative Action on Climate and Health (ATACH), which draws up roadmaps and formulates national strategies that include these commitments and objectives. At the 15th Conference of the Parties (COP15) to the United Nations Convention on Biological Diversity (CBD), the 2030 mission was to "put nature on a path to recovery for the benefit of people and planet". Working Group II submitted a draft decision on "Biodiversity and Health," specifically addressing the need for measures in the context of "One Health" and mentions about "the human right to a clean, healthy and sustainable environment".

As recent developments show, momentum for efforts to promote planetary health is growing around the world, particularly for climate change. However, each country feels different impacts of global warming and other aspects of climate change or environmental burden and requires diverse solutions if we are to meet the goals in this area. Instead of perceiving environmental, health, and economic issues as separate from each other, it will be crucial that industry, Government, academia, and civil society collaborate in a comprehensive manner across sectors when implementing solutions.

At this meeting, experts from Japan and overseas will review discussions at COP27 and COP15 on the connections between human health and the global environment and help build awareness and understanding toward issues facing this area. We will also bring stakeholders from industry, Government, academia, and civil society together to sort discussion points and provide information about the future steps to foster an environment for discussions at the G7 Hiroshima Summit and related high-level meetings in 2023. On behalf of the organizers, I would like to welcome all the participants, either in person or online, to this Nagasaki Planetary Health Expert Meeting. Planetary Health is a relatively new concept which was introduced less than a decade ago. It refers to human health and the health of the planet, and how we examine the interrelationship of the two together.

Currently, we have been confronted by many issues including climate change, loss of biodiversity, and environmental pollution, all of which impact human health. It is becoming clearer that these issues are resulting from various human activities created by of our own society. Therefore, to tackle these issues, transdisciplinary approaches need to be employed.

This meeting consists of two parts; in the first part, efforts to address climate change and its impact on human health will be discussed. In the second part, the focus will be on biodiversity and environmental pollution, particularly highlighting the role of Japan and its universities and research institutes should play. In both parts, panelists are invited from academia, the private sector, international organizations, and Government, allowing for discussions to be held that offer broader perspectives and new insights.



President, Nagasaki University Shigeru Kohno





Kiyoshi Kurokawa Chairman, HGPI

Putting Forth the Issue of the Anthropocene from Nagasaki

Among Japan's cities, Nagasaki is particularly well-known to many people around the world. It once served the port where people from the west arrived at Japan's shores, which opened the country up to the world. Alongside Hiroshima, Nagasaki is also known as one of the cities where an atomic bomb was dropped. Puccini's opera "Madame Butterfly" has been performed around the world and is set here, in Nagasaki. I would like to say once again, "Welcome to Nagasaki."

What is the Anthropocene? Global warming, wars, and other calamities are all caused by humanity. Human beings have egos. The G7 Summit and other top-level meetings are attended by global leaders who possess both power and capital. How can we address the problems that humans have caused up until now? Answering this question is one of the Summit's missions.

It is vital for each country to demonstrate what efforts they can make. This may take time, but nothing will happen unless we take action. It will be important to advance what we can do one step at a time, without thinking of reasons that may prevent us from doing so. Each country might have its own way of accomplishing this, but it is their duty to take action. Deciding how we will take action is the responsibility of each and every one of us.



Keynote lecture



Forging New Partnerships to Bring Health to the Heart of Climate Action

Alan Dangour Director of Climate and Health, Wellcome Trust

Climate change has become a threat to human life

Since the 1990s, global temperatures have increased by an average of 1.1°C to 1.2°C. Furthermore, we know that temperature change in Japan is higher than the global average. Predicting changes in global average surface temperatures by the year 2100, if we implement sufficient mitigation strategies and move along Representative Concentration Pathways 2.6 (RCP 2.6) (which is also referred to as the "low stabilization scenario" or the "2-Degree Scenario" and corresponds to achieving the aspirational goal of 2 °C set by the Paris Agreement), we can limit the increase to around 1.5 °C. If we continue along our current trajectory of RCP 8.5 (also known as the "high-emissions scenario" or the "4-Degree Scenario" and corresponds to the potential state of the world if additional measures to address climate change are not taken), then temperatures will rise by 3.0 $^{\circ}\text{C}$ to 4.0 $^{\circ}\text{C}$ by the end of the century. If that occurs, the Arctic ice will melt and cause the sea level to rise by 20 meters, which will make some regions uninhabitable and may cause damage that will account for 10% to 12% of gross domestic product (GDP).

The Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report (AR6) that was presented in March 2023 confirmed that impacts from climate change are occurring earlier and on scales greater than previously projected. It also made clear that we are headed toward warming of at least 1.5 °C in the coming decade. Section C1 of the Summary for Policymakers states:

The Intergovernmental Panel on Climate Change Sixth Assessment Report Section C1 of the Summary for Policymakers states

- Climate change is a threat to human well-being and planetary health (very high confidence).
- 2. There is a rapidly closing window of opportunity to secure a livable and sustainable future for all (very high confidence).
- Climate resilient development integrates adaptation and mitigation to advance sustainable development for all, and is enabled by increased international cooperation including improved access to adequate financial resources, particularly for vulnerable regions, sectors and groups, and inclusive governance and coordinated policies (high confidence).
- The choices and actions implemented in this decade will have impacts now and for thousands of years (high confidence).



The multifaceted health impacts of climate change

Climate change, extreme weather events, freshwater depletion, land use change, biodiversity loss, ocean acidification, and air pollution directly impact human health in the form of events like heat waves, floods, and fires. Ecosystem-mediated impacts result in issues like vector- and water-borne diseases, mental health challenges, and malnutrition. There are also socially-mediated effects of climate change like increased poverty, migration, or conflict.

If we continue to make the wrong choices, heat-related mortality caused by anthropogenic climate change will continue to increase and expose us to infectious disease risks like malaria and dengue fever. There will be severe effects on crop yields, which will cause food prices to skyrocket. This could result in unrest like the rioting that broke out in 30 to 40 countries during a food crisis in 2008.



The need for multisectoral partnerships for climate change and health

To respond to climate change, resilience should be incorporated into health systems and action should be taken to protect vulnerable populations. This will require huge advocacy efforts to support greater understanding of the health impacts of climate change, especially in low- and middle-income countries. Health must also be escalated within national and global climate policies. The mission of the Wellcome Climate and Health Strategy is to put health at the heart of climate action and we will concentrate on producing evidence on impacts, mitigation, and adaptation to drive policy action. Together with researchers, advocates, funders, international development partners, and G7 Health Ministers, we will work to encourage development and create a new field of climate change and health.

We must recognize that climate and health intersect, reduce greenhouse gas (GHG) emissions, and mitigate climate change. This is a priority issue that cuts across all related development programs including those in agriculture, food systems, basic water, sanitation, and hygiene (WASH) services, and infrastructure. This is also the case in collaborative development. Climate change should be talked about in every related area.



Sustainable Markets Initiative (SMI) Activities



Pam Cheng

Executive Vice President, Global Operations and IT and Chief Sustainability Officer, AstraZeneca

The largest public health crisis of our time: Climate change

Accelerating the transition to net zero (when atmospheric GHG emissions are balanced by removing an equal amount of GHGs from the atmosphere) and building resilient health systems is a key issue. Furthermore, more people around the world are beginning to recognize the fact that the health of our planet and the health of people are deeply interconnected. Air pollution alone claims the lives of 7 million people each year, while environmental factors as a whole are estimated to kill approximately 14 million people per year. Given these circumstances, AstraZeneca views the climate crisis as the largest public health crisis of our time. The climate crisis is also a health equity crisis, as the most vulnerable populations bear the highest burden. We must act today and we must act together.

AstraZeneca's efforts for decarbonization

AstraZeneca is advancing thorough decarbonization measures throughout its operations and value chain under an initiative titled, "Ambition Zero Carbon," and is one of the first seven companies in the world to have its reduction targets verified by the Science-Based Targets initiative (SBTi). I am proud that we are on track to achieve our goal of a 98% reduction in GHG emissions from our global sites and fleet by 2026. AstraZeneca is working to halve total emissions across its entire value chain by 2030 and to become net zero by 2045.

To fulfill its global commitment, our Japanese subsidiary is advancing bold measures which include the use of the latest digital technology. For example, we have digitized all the paper package inserts in all our products. This change was made in accordance with a revision of a Japanese law on digitizing package inserts for our medicines. We are deeply impressed by the Government of Japan's leadership on this issue and are now using this as a best practice in other key markets.

Through our leadership of the Sustainable Markets Initiative (SMI)

Health Systems Task Force, which was initially launched by His Majesty King Charles III of the United Kingdom and convened by AstraZeneca CEO Pascal Soriot, AstraZeneca is also working to accelerate the transition to net zero in health systems in collaboration with global healthcare companies, the World Health Organization (WHO), and other major players. We have identified three priority areas: supply chains, patient care pathways, and digital health. These three areas will be critical for both decarbonizing and reinforcing health systems and we are now forming plans for collaborative action in these areas.

Looking to the future and forming partnerships to reshape health systems to respond to climate change

We must take immediate action to adapt and reinforce health systems to effectively address climate change health impacts such as non-communicable diseases (NCDs), which are growing in prevalence. Healthcare sector GHG emissions account for about 5% of all global emissions, so drastic measures to reduce emissions must also be taken. Partnerships will be vital for achieving this. Through bold collaboration that spans the public and private sectors, we must transcend mutual boundaries and work hand-in-hand and learn from each other. This is also the guiding principle of the Partnership for Health System Sustainability and Resilience (PHSSR), which aims to strengthen health systems around the world through evidence-based policy change.

Building resilient health systems and accelerating net-zero healthcare are two sides of the same coin, and they can only be achieved together. I am hopeful that through our concerted and collaborative efforts with our partners in Government, academia, non-governmental organizations (NGOs), and the private sector and with a healthy dose of optimism, we will build a bright and healthy future. How the International Community Should Address Climate Change to Solve the Urgent Health Challenges of Today

Panelists

Alan Dangour Director of Climate and Health, Wellcome Trust

Masahiro Hashizume

Professor of International Health Policy, School of International Health, Graduate School of Medicine, University of Tokyo

Keisuke Nansai Director, Global Resource Sustainability Research Section, NIES

Maria Neira Director, Department of Environment, Climate Change and Health, World Health Organization

Juliette White CBE Vice President Global SHE and Sustainability, AstraZeneca

Moderator

Joji Sugawara Vice President, HGPI

The international community's approach to climate change and the need for active involvement from Japan

Around the world, people are beginning to recognize the impact and magnitude of climate change. Achieving global solutions will require all countries and groups – including public, private, and research groups – to align themselves. We must build an ecosystem and implement strong protective measures. Interventions must be made where protection has been insufficient, such as for water, sanitation, and electricity, and in healthcare facilities.

The Alliance for Transformative Action on Climate and Health (ATACH) encourages participation from G7 countries. We must take up the reins of leadership. As the G7 President, it is up to Japan to demonstrate leadership.

This year, the United Nations Climate Change Conference or Conference of the Parties of the UNFCCC (COP28) will include its first-ever "Health Day." The addition of health to the COP agenda is a positive development. We must take this as an opportunity to gather sufficient scientific evidence to deepen our understanding of climate change and health.

As one of the world's leading importers, Japan places a burden on other countries. As such, Japan cannot contribute to planetary health with only domestic efforts; it must reduce its impact on other countries. The impact of Japan's economic activities falls upon the economically and medically disadvantaged. We must recognize the decisions that we make affect those outside of Japan and work to change the status quo.





Examples of how the environment affects human health (heat stroke and mental health)

According to an assessment of climate change impacts from the Ministry of the Environment (MOE), Japan, heat stroke and heat-related mortality are both severe, highly urgent issues for Japan. Another concern is the risk of infectious disease outbreaks, especially the re-emergence of dengue. Over the past five years, the annual number of people transported to emergency rooms for heat stroke averaged over 70,000 people per year, and approximately 1,300 people have died. More than 80% of those deaths occurred among older adults.

It is vital that we reaffirm that heat is a natural disaster and that the climate crisis is a health crisis. It is urgent that we advance countermeasures. In terms of adaptation measures, the Government of Japan has been issuing nationwide heat stroke alerts since 2021. Moving forward, these alerts must be utilized more effectively and updated. Will our current emergency transport system be enough to cover the increase in people who are transported to emergency rooms for heat stroke in the future? Do we have enough resources like health institutions and healthcare professionals? We must conduct simulations and provide evidence.

We must fully recognize the impact of climate change on mental health. The first specific example of this impact is called "Eco-Anxiety," which is a form of anxiety toward the critical situation for the global climate that people will face in the future. Many members of younger generations are experiencing eco-anxiety. The second impact is called "solastalgia," which is a form of anguish people feel over the loss of familiar natural environments due to climate change. Detailed analyses of the impacts of these effects are still in their early stages, but some are concerned that these mental health impacts will accelerate after the COVID-19 pandemic.

We should recognize the healthcare sector's negative impacts on the environment

In Japan, serious efforts to decarbonize are being made in each sector of industry and the Government is advancing budgetary measures. Given this massive movement, how can healthcare contribute to achieving the same goal? While it seems discussions are being held on measures for heat stroke, how will healthcare approach the issue of mitigation?

It is said that the healthcare sector is responsible for 5% of Japan's CO2 emissions. It has been said that 70% of this is in the form of indirect CO2 emission. We must not overlook the issue of indirect emissions from the supply chain that occur due to transportation processes for pharmaceuticals, medical materials, and medical equipment, as well as the transportation and disposal of medical waste.

The healthcare sector can be a leader in protecting human and planetary health

When considering measures to reduce CO2 emissions in the healthcare sector, first, we must understand that the necessary level of reduction is not something that can be attained a little at a time through individual initiatives. Based on that understanding, the quickest solution is to advance measures for mitigation and adaptation as a system. As for supply chain decarbonization, rather targeting only the direct emissions from the healthcare sector, efforts must aim to decarbonize the entire supply chain. As healthcare providers are influential and responsible for health in their communities, it would be good to see healthcare providers in Japan take the lead in actions for climate change as they have done in other countries.







Just as companies in the finance sector have committed to publicizing their CO2 emissions and are working to guide society through careful investments, the healthcare sector should also publicize CO2 emissions and provide guidance to society on building healthier communities. Efforts to reduce CO2 emissions should also be linked to health outcomes and the results of those efforts should be publicized more broadly.

The healthcare sector can provide leadership in three transitions:

- 1. Transition from fossil fuels to renewable energies and greatly reduce mortality from air pollution
- 2. Transition to sustainable food systems
- Engage in healthy urban planning to create communities that facilitate exercise and provide health co-benefits such as air pollution prevention and infectious disease control

In the U.K., the National Health Service's (NHS) is currently carrying out an initiative called "Greener NHS" which aims to address the environmental impact of the healthcare sector. It is aligning goals and expectations throughout the healthcare supply chain and emphasizes reflecting them in its contracts. It is also important for the private sector to set clear expectations. Identifying emission pathways and getting suppliers to report them requires public support for meeting targets. As such, while sending a clear message to the market and investing in renewable energy, it will be important to demonstrate solutions to suppliers and accelerate emission reductions.

Various partnerships are essential for global actions like those to address climate change. The entire health community should unite to take action in collaboration with other sectors within a single strategic framework.

Actions that must be taken for human health and climate problems in other sectors

In various fields like finance, transportation, agriculture, and energy, it is necessary to think about topics related to the environment and health. For example, health must be included as a topic within financial plans. Nationally Determined Contributions (NDCs) created up until now have always included perspectives on climate change-related health risks, but countries must give further consideration to health co-benefits in the future. At the G7 Hiroshima Summit, Japan should emphasize the importance of including the perspective of health in climate action in its capacity as G7 President. It would be good to then link that to COP28.

A message to young people on addressing climate change

Climate change is the largest public health crisis of all time. We must solve it with speed.

The younger generations can use their own broad-reaching platforms to tell the world about the future they want. It will be important for various sectors to collaborate to generate practical solutions and for us to advance with greater speed and on a grander scale.

When working to address climate change, the only way forward is for each individual to consider their environmental footprint and to take what actions they can. I want young people to talk to their friends, become advocates, and remain hopeful. We can sort this out, but we all need to work together. I would like for us to make sure our actions protect our children's futures and make future generations proud.

Keynote lecture



Cross-Disciplinary Efforts to Contribute to Planetary Health

Shigeru Kohno President, Nagasaki University

In the near future, we will reach the limits of poor health for the planet

The climate crisis is not a problem for the distant future that we will face in 100 or 1,000 years. If we take no action to address climate change, in the future, high temperatures will make it impossible for people to live in the area shown by the dotted red line, which spans Africa, Asia, and South America. This area covers approximately 20% of the total land area of the earth, and it is estimated that over 300 million people living in these regions will be forced to migrate. I must emphasize that this projection is for only half a century in the future. In other words, some of those in attendance today – especially members of the younger generation – may see such a planet someday.

Climate change is not the only problem. The illustration of the planetary boundaries shows there are problems in a total of nine areas, including climate change. In particular, it is believed that boundaries for biodiversity and phosphorus and nitrogen flows have already been exceeded due to disruption from humanity. This is another item that demonstrates how different fields are affecting each other.



Nagasaki University's transdisciplinary initiative for planetary health

While there are experts in various fields at Nagasaki University, if they each think about issues on their own, it will not be possible for us to address problems that affect humanity on a global level. Based on our belief that new solutions can only be created when our entire university unites as one cooperative body and pools our knowledge, Nagasaki University has declared that it will take up the "Planetary Health Challenge." This is a major goal that aims to achieve health for our planet and is an initiative to which everyone conducting research at our university will be connected. It was a great source of encouragement to learn that this objective is in line with the concept of planetary health that was previously published in the Lancet Commission.

The 17 Sustainable Development Goals (SDGs) can be divided into three levels based on their content, which is often referred to as the "SDGs wedding cake." The top two tiers encompass issues for the economy and for society. Both of these are related to human health and human society and are usually considered as topics within the social sciences and humanities in addition to the field of medicine. The bottom level is the biosphere and includes the aforementioned planetary boundaries. This area is mainly handled by climatologists, oceanographers, and ecologists. In planetary health, which encompasses all three layers at once, we consider the relationships between society's health and the health of the natural environment and attempt to find solutions that benefit both. This means planetary health requires transdisciplinary research that involves specialists in the social sciences.



Generating new knowledge alone will not be enough to achieve planetary health; it will also require implementing the use of that knowledge in society. This means activities cannot be performed entirely within the research community. They must also involve citizens, companies, and governments, as well as have collaboration with the international community. Furthermore, in addition to the current generation, we must also consider future generations as well as various living things other than humans. It is safe to say these forms of collaboration outside of the research community – in other words, transdisciplinary collaboration – will be a key pillar of planetary health.

Starting from FY2021, Nagasaki University made Planetary Health 101 a required course for all of the approximately 1,700 incoming students in all departments. We are proud to say this is a unique endeavor in the world. We also translated and published a Japanese version of a book for the general public in 2020 and began using it as a university textbook in FY2022.

Nagasaki University established the Interfaculty Initiative in Planetary Health at its graduate school last fall. We also started offering the Interfaculty Initiative in Planetary Health Doctor of Public Health (DrPH) program as an advanced professional education program in which faculty members from multiple graduate schools work together to educate students.

Successful actions for planetary health cannot be accomplished by a single university alone; they will require various forms of collaboration in Japan and around the world, both inside and outside of academia. Nagasaki University was early to join a global initiative for planetary health called the Planetary Health Alliance (PHA). The number of universities in Japan that are interested in planetary health is gradually increasing and we have established a network among their researchers.

That network has been registered as the PHA's Japan hub, and Nagasaki University serves as its secretariat.

Together with over ten domestic research institutes, Nagasaki University is also a supporter of the Global Secretariat Hub Japan, which is an international secretariat of a global initiative on environment and sustainability called Future Earth (FE). Last fiscal year, faculty members from Nagasaki University participated in formulating "10 New Insights in Climate Science," a major initiative from FE that crystallizes the latest findings related to climate change.

The Japanese perception of the natural world and affinity with planetary health

What should Japan's role be in achieving planetary health goals? The basis of planetary health is the relationship between humans and nature. The unique aspects of how Japan views nature has been pointed out since long ago. Japanese concepts like Satoyama, wind chimes, haiku, the Eight Million Gods, and borrowed scenery all demonstrate a worldview in which humans and nature are one.

The basis of Japanese culture is its worldview in which people project themselves into nature when thinking about nature, and conversely, superimpose the workings of nature when they think about society. I think this worldview may naturally result in achieving planetary health. This worldview is not something that is unique to Japan; it can be found in many societies. I believe that nurturing such worldviews to incorporate various forms of wisdom to create a sustainable society is one of Japan's responsibilities, especially for universities. Video message vol.2

Initiatives in the Field of Biodiversity and Environmental Pollution



Kazuhiko Takeuchi

President, IGES

Biodiversity has important effects on planetary health

Planetary health poses the key topic of identifying how to overcome the critical situation facing human health and the environment that has been caused by human activities that exceed the planetary boundaries.

The IPCC released the Synthesis Report for the AR6 on March 20, 2023. The AR6 Synthesis Report Summary for Policymakers provides details on climate and biodiversity. It says that while almost all of Earth's ecosystems and biodiversity will face severe impacts from climate change, ecosystems provide extremely important functions for both climate change mitigation and adaptation, such as by fixing carbon and or by buffering against extreme weather events and natural disasters.

To address this, the Report recommends that climate change action should focus on minimizing anthropogenic carbon emissions and protecting and restoring natural ecosystems to maximize the functions of natural ecosystems.

How biodiversity benefits human health

As the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) Global Assessment Report points out, biodiversity is essential to human health. For example, it is estimated that 4 billion people – almost half of the global population – use natural medicines. It goes further to state that nature supports all aspects of human health through contributions like food production and air and water purification.

From 2020, the COVID-19 pandemic provided us with the opportunity

to reaffirm that there is a close relationship between the Earth's health and human health, as represented by its biodiversity. According to the IPBES Workshop on Biodiversity and Pandemics Report presented in 2020, 70% of emerging diseases are zoonoses and 30% of emerging disease events are the result of land-use change, agricultural expansion, and urbanization.

How to approach the boundaries among specialties to uphold planetary health

The COVID-19 pandemic led to growing emphasis being placed on the One Health approach, which views the health of the environment and animal and human health in an integrated manner. Recognizing that unsustainable economic and social systems were an undercurrent during the COVID-19 pandemic, IGES is advocating for a framework based on response, recovery, and redesign called the "Triple R framework" for decision-making. We hope it will guide our recovery from the pandemic and our transition to a more sustainable, resilient world.

We also know that air pollution in developing regions, especially those in Asia, resulted in more severe health impacts and higher fatality rates from COVID-19. These regions are experiencing severe air pollution including indoor pollution in addition to CO2 emissions from energy production and consumption using fossil fuels. IGES is now promoting a co-benefits approach to simultaneously address both climate change and air pollution.

To achieve planetary health, we must set growth targets that are within the planetary boundaries. For this reason, I think it will be essential for us to expand research with a comprehensive, overhead point of view in a manner that surpasses the boundaries among specialties.

Planetary Health: Comprehensive Perspectives on Measures Japanese Society Should Take

(Panelists)

Fumiko Kasuga

Global Hub Director, Japan Hub, Future Earth; Professor, School of Tropical Medicine and Global Health, Nagasaki University; Professor, Interfaculty Initiative in Planetary Health, Nagasaki University

Tony Capon

Professor, Monash Sustainable Development Institute, Monash University

Makoto Haraguchi

Fellow, MS&AD InterRisk Research & Consulting, Inc.; TNFD dedicated SVP, MS&AD Insurance Group Holdings, Inc.

Hiroya Yamano

Director, Biodiversity Division, NIES

Moeko Yoshitomi

Deputy Director, Office of Global Health Cooperation, International Affairs Division, MHLW; Assistant Director, Water Supply Division, Pharmaceutical Safety and Environmental Health Bureau, MHLW; International Affairs Team, Novel Coronavirus Response Headquarters

Moderator

Chiho Watanabe

Dean, Interfaculty Initiative in Planetary Health; Professor, School of Tropical Medicine and Global Health, Nagasaki University



Bidirectional challenges on the global and local levels and how to address them

Problems facing biodiversity and environmental pollution start at the local level. In some cases, they only affect a particular region, but in other cases – such the COVID-19 pandemic – the impacts of local problems can spill over to the global level. Meanwhile, the impacts of global-level problems always spill over to the local level and manifest as different problems in different regions. We must recognize these two points.

Air pollution is a representative example of a bidirectional issue at the global and local levels. In recent years, transboundary air pollution generated in Asia has been blown into Japan and around the world, where it is making climate change more severe and is exacerbating air pollution. However, instead of countries trying to hold each other accountable for global problems that may have emerged at the local level, each country should examine how it can negotiate on controlling emissions for the health of the citizens of each nation.

members to engage in collaborative action. However, in Japan, it sometimes feels that academia and government are distant from each other in efforts to collaborate. It is as if one party is in Kasumigaseki while the other is in Tsukuba. We are now faced with a situation in which each party is unable to communicate to the other what it believes to be the essence of each problem, and the importance of each problem does not get recognized at the right time. I believe we should hold dialogues that are based on data, but efforts are sluggish when multiple ministries get involved, and many situations feel difficult.

Attitudes should be reformed, including our approach to supply chains

High-income countries must recognize their responsibilities with regards to supply chains

High-income countries like Japan draw resources from other countries through supply chains. It is important that we understand the metrics of this, including for healthcare system supply chains, but people in academia and throughout society do not have a sufficient understanding of those metrics. This is an item that lies outside the Paris Agreement or the SDG frameworks, as their focus is national accounting. It is wonderful that high-income countries are taking action to achieve net zero emissions, but if they are still producing pollution and emissions in other countries, controlling that pollution and those emissions is part of the responsibility of high-income countries. It will be important to reduce consumption, understand supply chains, and use citizens' purchasing power to drive transitions throughout global supply chains.

The Taskforce on Nature-related Financial Disclosures (TNFD) was launched in 2021 and is working to define a common global set of metrics on the relationship between nature and finance. The Task Force on Climate-related Financial Disclosures (TCFD) presented a report in 2017 and has been working to encourage the global financial community to align with efforts to achieve the Paris Agreement, and has been gaining rapid momentum. The TNFD plans to present its first edition later this year in September.

Japan's industrial sector is a world leader in the import of natural resources, but traceability is low. In the future, this will be a major hurdle to TNFD disclosure. In societies that are becoming increasingly urbanized and cut off from relationships to nature, we tend to measure value in terms of price. For example, instead of buying food products from domestic farmers, people will choose to buy imports because it is cheaper to emit CO2 and ship them from Indonesia. Such choices are making both society and human health less resilient.

Japan relies too heavily on imports while underutilizing its own natural resources

Partly due to climate change, commodity prices are increasing amid global inflation. If this continues, Japan may no longer be able to afford imports. The reason Japan is importing goods it has the capacity to produce domestically is because its past policies were formulated with trust in the theory of the international division of labor and did not emphasize improving self-sufficiency. Australia also encountered problems during the COVID-19 pandemic due to its dependence on other countries, such as for the textiles used in personal protective equipment (PPE) in healthcare. The Australian Government is now reflecting on its dependence on Asian countries for such goods.

In addition to its dependence on external supply chains, Japan was the only country where "underuse" was identified as an issue in discussions at the Convention on Biological Diversity (CBD). Meanwhile, "nature loss" was a key issue for many other countries. In other words, Japan was found to be depleting the environments in forests and rivers in areas people live in developing countries without using its own resources.

In Japan, insufficient use of domestic resources has resulted in problems such as abandoned farmland and wildlife damage. Wild boars and deer are leaving the mountains and entering human settlements, where they are coming into contact with people. This could trigger an epidemic of tick-borne diseases. It will be necessary to examine methods of addressing both issues that have resulted in the current imbalance, namely, Japan's over-dependence on other countries and its under-utilization of domestic resources.

Large-scale collaboration for achieving planetary health

Current circumstances for collaboration in planetary health and the need for concerted efforts





Challenges facing planetary health require academia, Government, industry, and community Achieving action on planetary health will require academia to make concentrated efforts in various areas. Academia requires knowledge from every field, including sociology, humanities, political science, natural science, and health science. If those in each field can humbly learn from each other's efforts and activities and understand each other's needs, new buds of science will begin to sprout. In various activities, it has been proven that this kind of mutual learning can be a catalyst for cross-disciplinary approaches. We must provide the latest findings to specialists in fields different from our own as well as to people outside of academia in an easy-to-understand manner and build an environment where many types of people can learn about the Earth's environment.

New developments in international collaboration in other fields

The TNFD Forum, which brings together those who support the activities of the TNFD, has now been joined by over 1,000 organizations around the world. After the U.K., the second-largest number of TNFD participants are from Japan. These include with the Financial Services Agency, the MOE, the Ministry of Land, Infrastructure, Transport and Tourism (MLIT), the Ministry of Agriculture, Forestry and Fisheries (MAFF), the University of Tokyo, Tohoku University, and the National Institute for Environmental Studies (NIES), and efforts to incorporate private sector funding and resources into policy are now beginning. It is likely more sectors will join in the future, and plans to develop guidance for the healthcare sector are currently in place.

Formulating integrated, transdisciplinary reports will be important when collaborating with other sectors. FE's "10 New Insights in Climate Science" is one such report that integrates fields like biodiversity, security, and health. FE also produces the Global Risks Scientists' Perceptions Report, which is a comparable scientific version of the World Economic Forum's Global Risks Report.

The FE also co-holds an annual meeting called the Sustainability Research & Innovation Congress (SRI Congress), which is an international conference where practitioners and researchers can work together on an even playing field.

A message on addressing planetary health for the next generation and the ideal roles of universities

The education people can receive at universities can transform climate change action. Many universities in the U.S. even teach students how to formulate policy recommendations to help policymakers understand the scientific findings they have obtained as part of education in fields related to the environment or climate change. The need to foster the next generation of leaders in academia and society who will be involved in planetary health is just as great as the need for transdisciplinary research.

It is important for young people who will shoulder society in the next generation, and students in particular, to be interested in what problems the world is facing, how those problems are presented to society, and how they are explained by specialists. And, they should be personally invested in knowing what actions they can take as citizens and as professionals.

Rather than our immediate benefit, we must consider how to achieve planetary health to ensure our children and grandchildren can lead happy lives in the future. People in all sectors should look forward to the day when various stakeholders can hold discussions while speaking the same language and sharing the same feelings.



Margaret Tongue Minister-Counsellor for Economic Affairs, the British Embassy in Tokyo

The Need for Us to Advocate for Actions on Climate Change

Climate change is something that has an impact on all aspects of life, including health, and is relevant to all industries and all sectors of the economy. We must understand those linkages to ensure actions are taken to reduce climate change as much as possible. That is one reason the UK government has been actively involved in a number of international initiatives.

For example, it is part of Alliance for Transformative Action on Climate and Health (ATACH) a network of countries and partner agencies which promotes collaboration to deliver on the COP26 in the UK. It requires participants to endorse commitments to 1: Climate Resilient Health Systems and 2: Sustainable Low Carbon Health Systems.

Regarding the topic of decarbonizing health systems, the National Health Service of England was the world's first health service to set net zero commitments. This has had an impact across the supply chain. Public health organizations have used the UK's "public sector decarbonization scheme" to invest over 600 million pounds in renewable energy generation and energy efficiency measures, such as replacing fossil-fuel powered ambulances with low-emission alternatives. It also aims to deploy digital technology to improve healthcare efficiency, accessibility, and sustainability.

I hope all of us go away from these discussions reflecting on the issues and suggestions shared, begin advocating in our own countries for changes that recognize the linkage between climate and health, and look for ways to adapt healthcare systems and reduce carbon emissions.



Kozo Akino Member of the House of Councillors; State Minister of Finance

Collaborating Among Ministries and Participating in the International Community to Achieve Planetary Health

To respond to the global climate emergency, discussions related to planetary health will be held at the G7 Hiroshima Summit, the G7 Nagasaki Health Ministers' Meeting, and at other meetings. For the first time, a day for in-depth discussions on health has been set aside during COP28, which will be held in the United Arab Emirates from November 30 to December 12 later this year.

The World Bank and Asian Development Bank are also working to support actions to address the climate crisis and healthcare challenges. Japan is involved with developing countries as a major shareholder through investments in Multilateral Development Banks (MDBs) and is contributing to their growth.

In addition to once again recognizing the linkages between humans and the planet from the perspective of planetary health, we also reaffirmed the need to gradually build interest in this topic moving forward. I think the time has come for us to think about our own lives, our work, and our policies, and take action to build a sustainable society.

As global discussions and initiatives focusing on the relationship between environmental issues and human health advance, members of the global community such as ourselves must take a serious look at environmental issues and human health in our own positions and capacities and contribute to addressing them.

Working together with the international community, the Ministry of Finance would like to maximize efforts from the MHLW, the MOE, MAFF, and other ministries and agencies to catalyze discussions in Japan and encourage proactive investment and other actions to be taken with a sense of duty.

Health and Global Policy Institute Guidelines on Grants and Contributions

As an independent, non-profit, non-partisan private think tank, Health and Global Policy Institute, (the Institute) complies with the following guidelines relating to the receipt of grants and contributions.

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The mission of HGPI is to improve the civic mind and individuals' well-being, and to foster a sustainable healthy community by shaping ideas and values, reaching out to global needs, and catalyzing society for impact. The activities of the Institute are supported by organizations and individuals who are in agreement with this mission.

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The Institute makes independent decisions on the course and content of its projects after gathering the opinions of a broad diversity of interested parties. The opinions of benefactors are solicited, but the Institute exercises independent judgment in determining whether any such opinions are reflected in its activities.

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The Institute will not partake in any activity of which the primary objective is to promote or raise the image or awareness of the products, services or other such like of its benefactors.

6. Written Agreement

Submission of this document will be taken to represent the benefactor's written agreement with the Institute's compliance with the above guidelines.





About Nagasaki University Interfaculty Initiative in Planetary Health

Planetary Health means "Health of the Earth." This new concept highlights changes such as global warming and abnormal weather; moreover, it draws attention to the destruction of the global ecosystem's homeostasis due to population explosion since the 20th century and global economic activities. It suggests that a global ecological approach is required to resolve existing and future challenges, including emerging infectious diseases. The Interfaculty Initiative in Planetary Health is a university-wide organization where specialists from sociology, economics, engineering, environmental studies, medicine, data science, and other fields collaborate across disciplines to address this global issue and foster practitioner leaders with a bird's-eye view and the ability to act.



About Health and Global Policy Institute (HGPI) Non-profit, Independent, and Global

Health and Global Policy Institute (HGPI) is a Tokyo-based independent and non-profit health policy think tank, established in 2004. Since our establishment, HGPI has been working to help citizens shape health policy by generating policy options and bringing together stakeholders as a non-partisan think-tank. Our mission is to enhance the civic mind along with individuals' well-being and to foster sustainable, healthy communities by shaping ideas and values, reaching out to global needs, and catalyzing society for impact. We commit to activities that bring together relevant players from various fields to deliver innovative and practical solutions and to help interested citizens understand available options and their benefits from broader, global, long-term perspectives.

Contact / Authors Planetary Health Project: (in no particular order)

Kasumi Kawasaki (Intern, Health and Global Policy Institute) Kozue Matsumoto (Intern, Health and Global Policy Institute) Shu Suzuki (Senior Associate, Health and Global Policy Institute) Niaya Harper Igarashi (Program Specialist, Health and Global Policy Institute) Eri Cahill (Program Specialist, Health and Global Policy Institute) Yuka Takai (Project Assistant, Health and Global Policy Institute) Joji Sugawara (Vice President, Health and Global Policy Institute)







A NAGASAKI Planetary Health Expert Meeting



Health and Global Policy Institute (HGPI)

Global Business Hub Tokyo Grand Cube 3F, Otemachi Financial City, 1-9-2 Otemachi, Chiyoda-ku, Tokyo 100-0004 JAPAN TEL+81-3-4243-7156 FAX+81-3-4243-7378 E-MAIL info@hgpi.org



https://hgpi.org/