Network for Education and Research on
Peace and Sustainability

SDGs Report 2025

HIROSHIMA UNIVERSITY SDGs REPORT

HIROSHIMA UNIVERSITY

The SDGs together with peace

Hiroshima University, The university in pursuit of peace

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President's Message

Founded in the city where the atomic bomb was dropped for the first time in human history, Hiroshima University has a unique historical and social background. With the philosophy of "a spirit of seeking peace," the University has fulfilled its mission of leading the development of peace science by advancing international education and research.

As the world works toward achieving the SDGs by 2030, the importance of peace science continues to grow. In the post-SDG era, it will become increasingly important for each individual to engage with the issue of "peace" as a personal matter and to take proactive action. With this future in mind, Hiroshima University established in May 2023 the "President's Five Initiatives for Peace Sciences – New Peace Sciences ('Creating Peace' that Realizes Safety and Security)." From among the many global challenges the world faces, the University has identified five key initiatives that can generate significant impact by leveraging its unique resources through interdisciplinary collaboration. By utilizing investments from society and the University's own resources, strengthening collaboration with internal organizations and existing initiatives, and focusing efforts on these priorities, Hiroshima University will expand its institutional functions and work towards realizing the vision of Hiroshima University as a new 'peace-creating' institution.

On August 6, 2025, marking the 80th anniversary of the atomic bombing, Hiroshima University held the Fourth Presidents for Peace Conference, where university leaders from around the world discussed peace, following the Memorial Ceremony for the Atomic Bomb Victims. Since the first conference was held in August 2024, the initiative has continued to develop, with 29 universities (including Hiroshima University) from 19 countries and regions, including Japan, participating to date. Through the participation of university leaders who visit Hiroshima, witness the realities of the atomic bombing, and share those experiences with students in their home countries, a framework is being established to learn about the realities of the atomic bombing in Hiroshima and to nurture the next generation of leaders who will contribute to peace and sustainability.

On November 25, 2024, as the second edition of the Presidents for Peace Conference, Hiroshima University hosted the "Hiroshima University Africa Day: Presidents for Peace Conference – Africa Chapter," inviting around 20 participants, including presidents of the Pan African University and the University of Tlemcen. During the conference, participants pledged to cultivate leaders who will promote peace and sustainability through partnerships between universities and through exchanges involving students and early-career researchers. Hiroshima University also concluded an international exchange agreement with the Pan African University, under which 20 students per year will begin studying at Hiroshima University from 2025 using scholarships from the African Union.

While Africa is rich in natural resources and has great potential for economic growth, it continues to face persistent conflicts and disasters. By strengthening ties with universities across Africa, Hiroshima University aims to nurture the people who will form the foundation of national growth and contribute to regional peace and sustainable development.

Our strength lies in "comprehensive knowledge," which transcends the boundaries of existing academic disciplines. Researchers in the natural sciences and the humanities and social sciences continuously collaborate and work together to address challenges from interdisciplinary perspectives. Hiroshima University positions its contribution to the SDGs as one of its highest institutional priorities. Through the synergy between comprehensive university reforms and institution-wide initiatives aimed at achieving the SDGs, the University is committed to making even greater contributions in research, education, and social engagement. We hope that this report will deepen your understanding of Hiroshima University's efforts toward achieving the SDGs, and we sincerely ask for your continued support in the future.

President, Hiroshima University
Mitsuo Ochi

Message from the Director of NERPS

Seven years have passed since Hiroshima University began the full-scale implementation of the SDGs. During this time, the University has steadily advanced initiatives aimed at achieving the SDGs.

To promote and evaluate universities' efforts toward achieving the SDGs, the UK-based higher education magazine Times Higher Education (THE) launched the THE University Impact Rankings in 2019, a participatory global university ranking system. Hiroshima University has participated in this ranking since its inception and has gradually improved its position each year. In 2025, among 68 participating universities in Japan, Hiroshima University ranked within the top 100 in the world in seven SDG categories, the highest number among Japanese universities. In the overall ranking, the University placed 101–200 out of 2,318 universities worldwide, ranking second in Japan, tied with Kyushu University, Osaka University, and Tohoku University, improving by one rank from the previous year. This high evaluation reflects the synergy between the University's leading institutional reforms and its university-wide initiatives toward achieving the SDGs, as well as the continued implementation of diverse activities in education, research, and social contribution.

Among the SDG categories, two goals ranked within the global top 100 while also achieving sole first place in Japan: SDG 11 (Sustainable Cities and Communities) and SDG 13 (Climate Action). Hiroshima University has maintained the top position in Japan for these two categories for two consecutive years.

Hiroshima University participates in all 17 SDG categories, working toward the achievement of the SDGs across a wide range of fields. In addition to the THE University Impact Rankings, the University's international efforts toward achieving the SDGs have also been highly recognized by the THE Awards Asia, which were established in 2019 to honor outstanding reform initiatives among Asian universities. In THE Awards Asia 2025, announced in April 2025, Hiroshima University won two major awards: "International Strategy of the Year" and "Outstanding Contribution to Environmental Leadership." This marked the first time a Japanese university received two awards simultaneously in these categories.

Hiroshima University has set the establishment of "Science for Sustainable Development" as part of its long-term vision. As a pioneer among Japanese universities, it has actively promoted university-wide systems for achieving the SDGs through initiatives such as the "Carbon Neutral × Smart Campus 5.0 Declaration," the establishment of the Hiroshima University Smart City Co-creation Consortium, training programs for faculty and staff, the introduction of Sustainable Development courses as common graduate-level subjects, the establishment of the Graduate School of Advanced Science and Engineering for Smart Society, the creation of the Hiroshima University Diversity & Inclusion Promotion Organization, the development of a co-creation hub for a marine cultural city centered on ocean remote sensing technology, and the establishment of vaccine and pharmaceutical manufacturing facilities at Hiroshima University.

As a unique initiative of Hiroshima University, the Network for Education and Research on Peace and Sustainability (NERPS) has been promoting, in collaboration with overseas universities and research institutions, the development of international research clusters of transdisciplinary research on "Peace and Sustainability." This project aims to establish a world-leading center for education and research that puts into practice the concept of "Science for Sustainable Development."

In March 2025, following the Hiroshima International Conference on Peace and Sustainability (March 2022), the NERPS Conference 2023 held in Thailand, and the NERPS 2024 Conference held at Hiroshima University, the international academic conference "NERPS 2025 Conference ," focusing on peace, sustainability, and peace-sustainability nexus, was jointly hosted with De La Salle University at its Manila campus in the Philippines. This international conference brought together 186 researchers, practitioners, and students from 69 universities, research institutes, and NGOs across 20 countries. Scholarships were provided to 12 students from developing countries to support their participation. Universities collaborating in NERPS's transdisciplinary research project to establish an international hub for peace and sustainability also contributed to the conference by organizing and hosting sessions.

NERPS plans to continue hosting this international academic conference on peace, sustainability, and peace-sustainability nexus annually, with the expectation that it will further promote exchanges among researchers, practitioners, undergraduate and graduate students working on issues related to peace, sustainability, or their nexus. These exchanges are expected to facilitate the advancement of related research and policy dialogue. The next conference is scheduled for March 2026, to be jointly hosted with the United Nations University at its headquarters in Tokyo.

As a national comprehensive research university, Hiroshima University conducts numerous world-class activities that contribute to the realization of a sustainable society, as well as initiatives that support both local communities and the international community. Due to space limitations, only a small portion of these activities can be introduced in this report; however, many more are featured on the NERPS website. We encourage readers to visit the website to learn more about Hiroshima University's wide-ranging initiatives aimed at achieving the SDGs.

Looking ahead, Hiroshima University will continue and further expand its efforts toward achieving the SDGs. Through these initiatives, the University aims not only to contribute to the achievement of the SDGs by 2030, but also to play a visible and meaningful role on the global stage in realizing a peaceful and sustainable world beyond 2030.

Executive Vice President of
Global Initiatives
Director of NERPS
Shinji Kaneko

Principles and Vision

Guiding Principles

Hiroshima University will fulfill its mission as a national university under the five Guiding Principles.

Hiroshima University Charter

Hiroshima University is a national research university established in 1949 in Hiroshima, which is the first atomic-bomb-stricken city in the history of humankind.Hiroshima University's mission is to contribute to the well-being of humankind by realizing a free and peaceful society based on the following five guiding principles: The Pursuit of Peace;The Creation of New Forms of Knowledge; The Nurturing of Well-Rounded Human Beings; Collaboration with the Local, Regional and International Community; and Continuous Self-Development.

1 Respect for human rights	In all its activities, Hiroshima University will not tolerate discrimination or harassment of any kind in relation to ethnicity, nationality, religion, belief, gender, economic or social status, or disability, and will respect and protect the human rights and individuality of each person.
2 Education	Hiroshima University will create an environment in which each student can learn independently and flexibly, while nurturing individuals with a rich sense of humanity, broad education, excellent specialized knowledge, and the ability to discover and solve problems on their own, who will contribute to the realization of a society that enables free and peaceful sustainable development.
3 Research	Hiroshima University will strive for an in-depth search for the truth and the creation of new knowledge through advanced and innovative research based on the free thinking of its researchers and will share the fruits of such endeavors with the wider community, in order to continuously create innovations to solve the problems faced by the local, national and international communities.
4 Social Contributions	As a university aspiring to be open to and trusted by society, Hiroshima University is determined to contribute to local and international society by actively publicizing its activities, securing cooperation and collaboration with local communities, industry, and other organizations concerned, and engaging itself in all activities including education, research, and medical care.
5 Realization of a sustainable society	Hiroshima University, as a university engaged in world-class activities for the realization of a sustainable society, will strive to lead the world in providing cutting-edge solutions to global issues such as poverty, conflict, the suppression of human rights, infectious diseases, and environmental, resource and energy problems.

The members of Hiroshima University will take pride in their work, reflect tirelessly on the role expected of them by the nation and the world, and continue to fulfill each member's mission by fully demonstrating his/her individuality and abilities while ensuring full compliance and showing mutual trust and respect.

Principles and Vision

Hiroshima University Code of Conduct

As a national research university established in Hiroshima, Hiroshima University is committed to fulfilling its mission of contributing to the well-being of humankind by realizing a free and peaceful society, and at the same time, it is required to be highly ethical, transparent and fully accountable for its activities. In order to live up to this responsibility, the University has established the "Hiroshima University Code of Conduct" as a guideline that all members should always be aware of and follow.

1. Respect for human rights and diversity	We will respect the human rights and personality of each individual, will not tolerate discrimination or harassment of any kind, and will realize a campus where all members can fully demonstrate their individuality and abilities.
2. Upholding independence and autonomy	While giving due consideration to social norms, ethics, and the integrity of our individual activities, we will uphold academic freedom and the autonomy and independence of education and research. We will aspire to conduct and develop research and education that are of the highest international standard, and return the fruits of such research and education to society.
3. Compliance with laws and regulations	In our activities as members of Hiroshima University, we will comply with social norms and rules, relevant laws and regulations, and university regulations.
4. Disclosure/Protection of Information	In order to fulfill our accountability to society in a transparent and fair manner, we will disclose to society the content and results of our activities and other information held by the University in a timely and appropriate manner, and will hold ourselves to high ethical standards in the use of that information, as well as in the protection of personal information.
5. Information Management	In order to ascertain the value of Hiroshima University's information assets and to ensure their safety and reliability, we shall fully recognize the threats to information security and shall manage and operate information appropriately in accordance with our respective duties.
6. Appropriate management of expenses and assets	We will manage and use the university's expenses and assets in an appropriate and efficient manner, always being aware that most of the expenses and assets for our activities come from taxes and other forms of social support.
7. Maintenance of a safe and secure environment	We will raise awareness of safety in the conduct of our operation and provide a safe, secure and comfortable environment for education, study, research, and work.
8. Addressing environmental issues	We will take the initiative in addressing global environmental issues such as climate change, large-scale disasters, environmental pollution and resource and energy problems, to hand over a stable environment to future generations.

Long-Term Vision "SPLENDOR PLAN 2017"

(SPLENDOR: Sustainable Peace Leader Enhancement by Nurturing Development of Research)

Hiroshima University's Mission

Hiroshima University intends to disseminate information related to our global challenges, with the aim of creating a new concept of "Science for Sustainable Development". It also strives to invite international researchers and students aspiring to knowledge creation and plays a role in creating a global, diversified, free, and peaceful society, by cultivating peace-pursuing, cultured individuals with an international mindset and a challenging spirit in all quarters of society including international communities.

Concept

Establishment of a Worldwide Research and Education Center Leading Science for Sustainable Development

In order to establish "Science for Sustainable Development," it is essential to be continuously engaged, in order to create knowledge which leads to a borderless, diversified, and peaceful society in collaboration with society as a whole, by embracing all the existing research fields related to the sustainability of human beings, society, culture, food, environment and nature. By devoting all available resources to the realization of this goal, Hiroshima University intends to produce the next generation of talented individuals who will contribute to the well-being of humanity, by establishing a worldwide research and education center implementing "Science for Sustainable Development."

Hiroshima University's Three Visions

Research	Enhancement of basic and advanced studies leading to "Science for Sustainable Development."
Education	Cultivating individuals who can oversee a changing world and can challenge existing norms on a global scale
Social Contribution	Strengthening of partnerships with regional and international societies

President 5 Initiatives for Peace Sciences

Towards a University that Creates Peace

The "President 5 Initiatives for Peace Sciences-New Peace Science（Creating Peace for Safety and Security）" was formulated in May 2023. The idea behind the Initiatives is for Hiroshima University (HU) to bring peace to people by making the best use of the "convergence of knowledge" that HU excels in and that can be generated by bringing together all the researchers in the humanities, social sciences, and natural sciences, and by implementing the research and education findings that contribute to the security of society. By addressing the five themes of the Initiatives---the main catalysts for driving major social change---with an interdisciplinary approach, we will deepen our collaboration with the various stakeholders associated with the University and realize "the Defined Goals of Hiroshima University".

1 **Innovation and Economic Security through Formation of Semiconductor Ecosystem**
To establish a stable supply system for semiconductor products, which are in short supply worldwide, by promoting R&D and human resource development in cooperation with semiconductor-related companies.

Initiative Leader
TERAMOTO Akinobu
Director
Research Institute for Semiconductor Engineering

2 **Global Public Health Security through Vaccine and Drug Development, Regenerative Medicine and Cell Therapy**
To develop a global workforce with the capacity to create vaccines and other medical treatments for pandemics and other emergencies, as well as to advance the field of regenerative medicine and cell therapy.

Initiative Leader
TANAKA Junko
Executive Vice President
(Kasumi Campus, Faculty Personnel and Public Relations)

3 **Peace through Comprehensive Radiation Disaster Management**
Fulfilling the primary objective of peace science by enhancing abilities to respond to radiation disasters using medical and social science approaches.

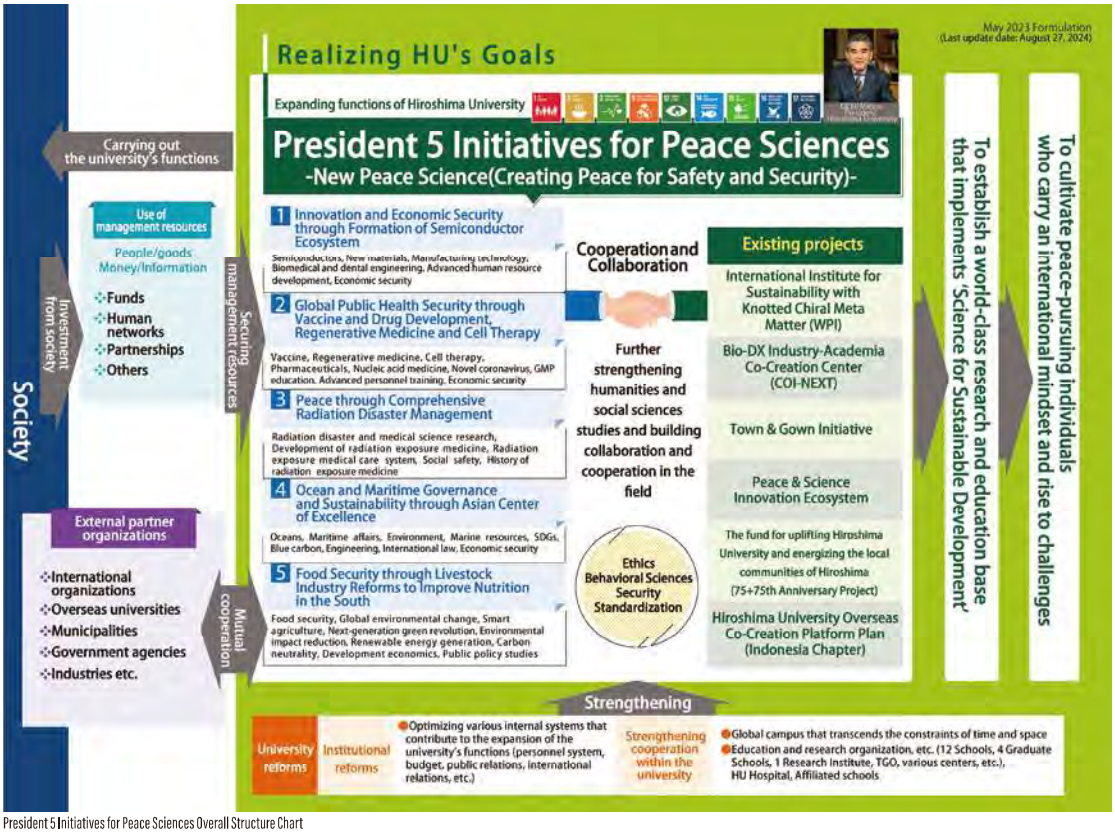
Initiative Leader
HIGASHI Yukihito
Director
Research Institute for Radiation Biology and Medicine

4 **Ocean and Maritime Governance and Sustainability through Asian Center of Excellence**
Aiming to provide innovative solutions to global marine and maritime issues by forming a center for interdisciplinary education, research, and social collaboration that brings together diverse experts in cooperation with international organizations, governments, and businesses.

Initiative Leader
KANEKO Shinji
Executive Vice President
(Global Initiatives)

5 **Food Security through Livestock Industry Reforms to Improve Nutrition in the South**
Contributing to the supply of highly nutritious food with a focus on poultry research and dairy cattle research, which boast the highest level of research capabilities and facilities in Japan.

Initiative Leader
SHIMADA Masayuki
Dean,
School of Applied Biological Science



President 5 Initiatives for Peace Sciences Overall Structure Chart

Hiroshima University's Efforts and Outcomes to Achieve the SDGs

Establishment of the University-Wide SDGs Hub

Background

To establish Science for Sustainable Development, implementing "interdisciplinary research," which crosses traditional academic boundaries, and "transdisciplinary research," which aims for problem-solving by going beyond the boundaries of academics and different stakeholders, are important.
In April 2014, Hiroshima University launched the "Taoyaka program for creating a flexible, enduring, peaceful society". Taoyaka program is a transdisciplinary 5-year master's and doctoral degree program that aims to train students from different academic disciplines to take the lead in the mutual creation of regional culture and state-of-the-art science to offer solution-oriented innovative technologies by working closely with local communities facing complex challenge.
In October 2015, Hiroshima University established the Hiroshima University Future Earth (FE) Education Research Network as a university-wide organization and formally joined the FE Japan Consortium (currently the FE Japan Committee).
Through discussions and interactions in FE, which is an international network of scientists and innovators who aim to realize a sustainable society, the potential of implementing transdisciplinary research on "Peace and Sustainability" and its importance were suggested.
In April 2017, the new long-term vision "SPLENDOR (Sustainable Peace Leader Enhancement by Nurturing Development of Research) PLAN 2017" was established. Hiroshima University set a mission to contribute to the realization of a diversified, free, and peaceful global society by establishing a new philosophy of peace science, "Science for Sustainable Development".
In May 2018, the FE network was restructured as the Hiroshima University FE/SDGs Network (English official name: Network for Education and Research on Peace and Sustainability; NERPS) to implement the three purposes indicated below and started implementing the SDGs in full scale and transdisciplinary research on "Peace and Sustainability."

Purpose

1. To establish "Science for Sustainable Development" which is stipulated in our university's long-term vision "SPLENDOR PLAN 2017" while consolidating the various efforts of Hiroshima University that contribute to solving global issues and strengthening research and educational capabilities to achieve the SDGs.

2. To form international research clusters of the transdisciplinary research on "Peace and Sustainability" to promote Purpose 1.

3. To disseminate the outcomes of education and research on the SDGs, and to promote networking with faculty members, students, staff members , domestic and international researchers, practitioners, and citizens.

Organizational Structure

NERPS badges

NERPS

NERPS

SDGs are global norm-building activities. For this reason, the United Nations has created SDGs logos and badges as communication tools. The number of people who agree with this and wear the badges has increased. In general, wearing the badges not only raises public awareness of the organization and initiatives throughout society, but also increases a sense of solidarity among members of that organization, who become committed to the spirit of their organization and initiatives.

SDGs initiatives cover an extremely wide range of fields, and Hiroshima University is working as a whole making a certain direction and applying its own characteristics. This is reflected in the SPLENDOR PLAN 2017, and in order to clearly demonstrate this commitment, original NERPS logos and badges were created to show how peace pursuits and education are being carried out by Hiroshima University. Specifically, we are focused on the initiatives for "Goal 4: Quality Education" and "Goal 16: Peace, Justice, and Strong Institutions," and we are confident that they will further drive our initiatives in relation to other goals. Students are invited to learn about these outlooks and specific initiatives and participate in them. They are encouraged to wear NERPS badges during their job-hunting.

Original logos and badges can be used to show that the wearer not only knows about or has individually joined and participated in SDGs activities carried out by the UN, but is also aware of the activities carried out by Hiroshima University as a whole and its active commitments. We hope that more members of Hiroshima University will support and participate in the initiative by wearing these badges.

Hiroshima University's Efforts and Outcomes to Achieve the SDGs

Visualization of University-Wide Contributions to the SDGs

Estimate the contribution to the SDGs using unique goal-achieving key performance indicators

At Hiroshima University, we use keyword information from academic journal papers published by faculty members of Hiroshima University to identify contributions to each SDG. By combining the keyword datasets and AKPI® (Achievement-motivated Key Performance Indicator) which our university has developed on its own, we try to grasp the efforts of faculty members from a broader perspective, including educational and social contribution activities. Please refer to the bottom of the next page for an overview of AKPI®.

Specific estimation method

❶ In this effort, "contribution to the SDGs" is calculated based on "the number of faculty members involved in the SDGs (writing academic papers related to the SDGs)" and "AKPI® points of faculty members who are authors".

❷ The Scopus papers published from 2015 to 2024 that include Hiroshima University faculty members (who are affiliated with the university as of May 1 of each year) as authors and the related SDG information (Elsevier 2025 Sustainable Development Goals (SDGs) Mapping *1) for each paper are extracted using the research analysis tool SciVal (Elsevier). After clarifying the relationship to the SDGs for each paper, we identify which authors are involved in which SDG items through which papers.

❸ The data on involvement in the SDG items for each faculty member from ❷ are linked to the AKPI® points for each fiscal year, and we accumulate the AKPI® points of the faculty members involved in the 16 SDG items.(*2) The points of each SDG are then divided by the number of involved faculty members to calculate the average value per faculty member.

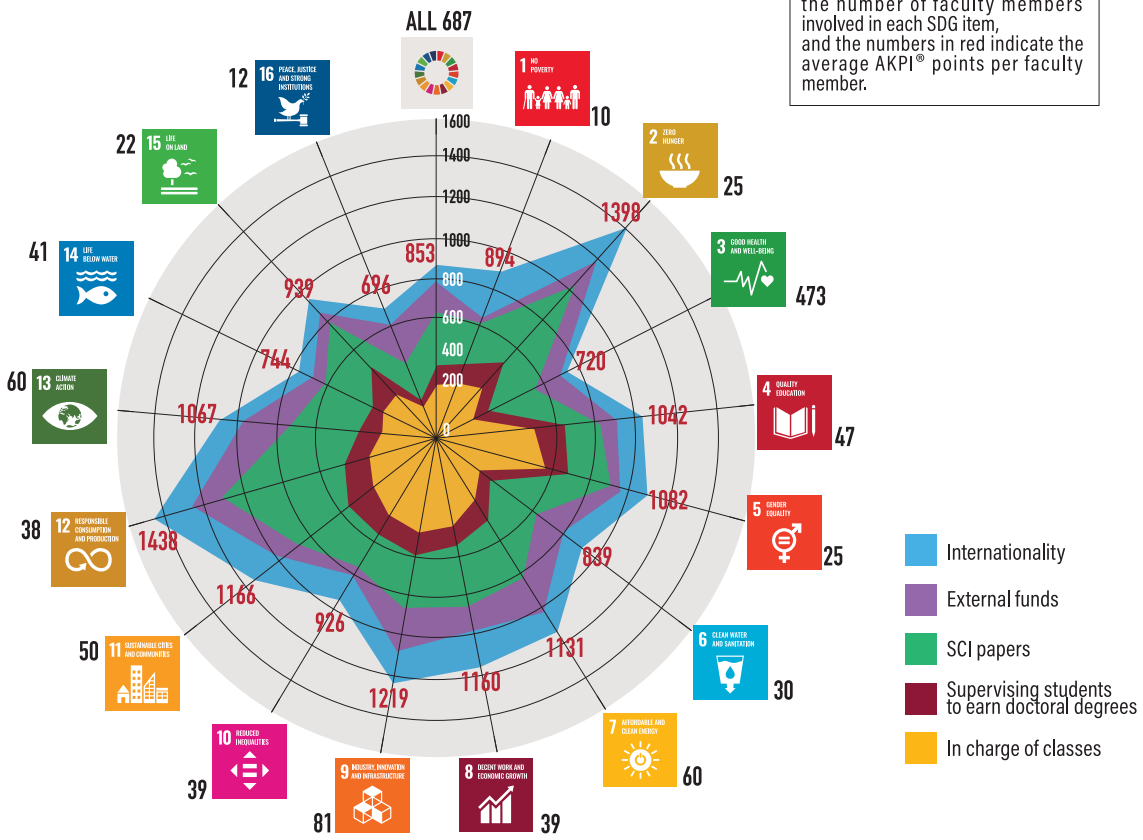
Figure A shows the visualization of the calculation results of papers published in 2024 using the above method. Looking at this figure, we can see that:

●SDG, which has many faculty members involved, are in the order of SDG_3 (473 people) ,SDG_9(81 people) ,SDG_7 (60 people) ,SDG_13 (60 people) ,SDG_11 (50 people).

●SDG with high AKPI® values are in the order of SDG_12 (1438P) ,SDG_2 (1398P) ,SDG_9 (1219P) ,SDG_11 (1166P) ,SDG_8 (1160P).

Figure A: Contribution to the SDGs (2024)

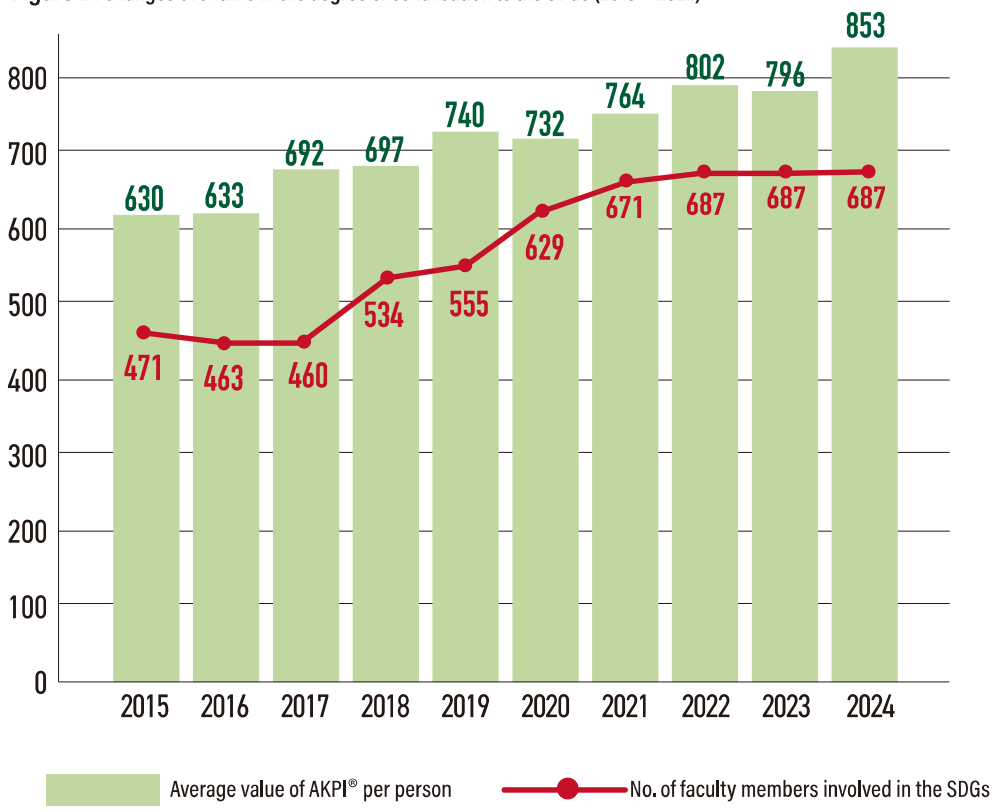
The numbers next to the logo indicate the number of faculty members involved in each SDG item, and the numbers in red indicate the average AKPI® points per faculty member.



Also, Figure B is a visualization of the changes over time in the average values of the number of faculty members involved in SDGs and the AKPI® value per person based on the Scopus papers published by Hiroshima University faculty members each year, based on the information on faculty members employed as of May 1 of each year.

Looking at this figure, we can see that both the number of faculty members working with their SDGs expertise and the average value of AKPI® are gradually increasing, indicating a greater contribution to the SDGs.

Figure B: Changes over time in the degree of contribution to the SDGs (2015～2024)



What is AKPI®?

AKPI®=Achievement-motivated Key Performance Indicator

AKPI® is a key performance indicator to be set as a target value for the next 10 years for one of the world's top 100 universities. AKPI® is composed of five elements ((1) in charge of classes [300 points], (2) Supervising students to earn doctoral degrees [150 points], (3) Number of SCI papers [300 points], (4) Acceptance of external funds [150 points], and (5) Internationality [100 points]). And if the total points of the five elements are 1,000 points per faculty member on average, it is an indicator showing that Hiroshima University is one of the top 100 universities in the world. For details, please see Hiroshima University's official website. https://www.hiroshima-u.ac.jp/sgu/page02_02

*1 Roberge, Guillaume; James, Chris (2025), "Elsevier 2025 Sustainable Development Goals (SDGs) Mapping", Elsevier Data Repository, V1, doi: 10.17632/p52c7d3hfs.1

*2 In the research analysis tool SciVal (Elsevier), SDG_17 was excluded from the extraction, so the analysis was conducted using information on 16 items excluding SDG_17.

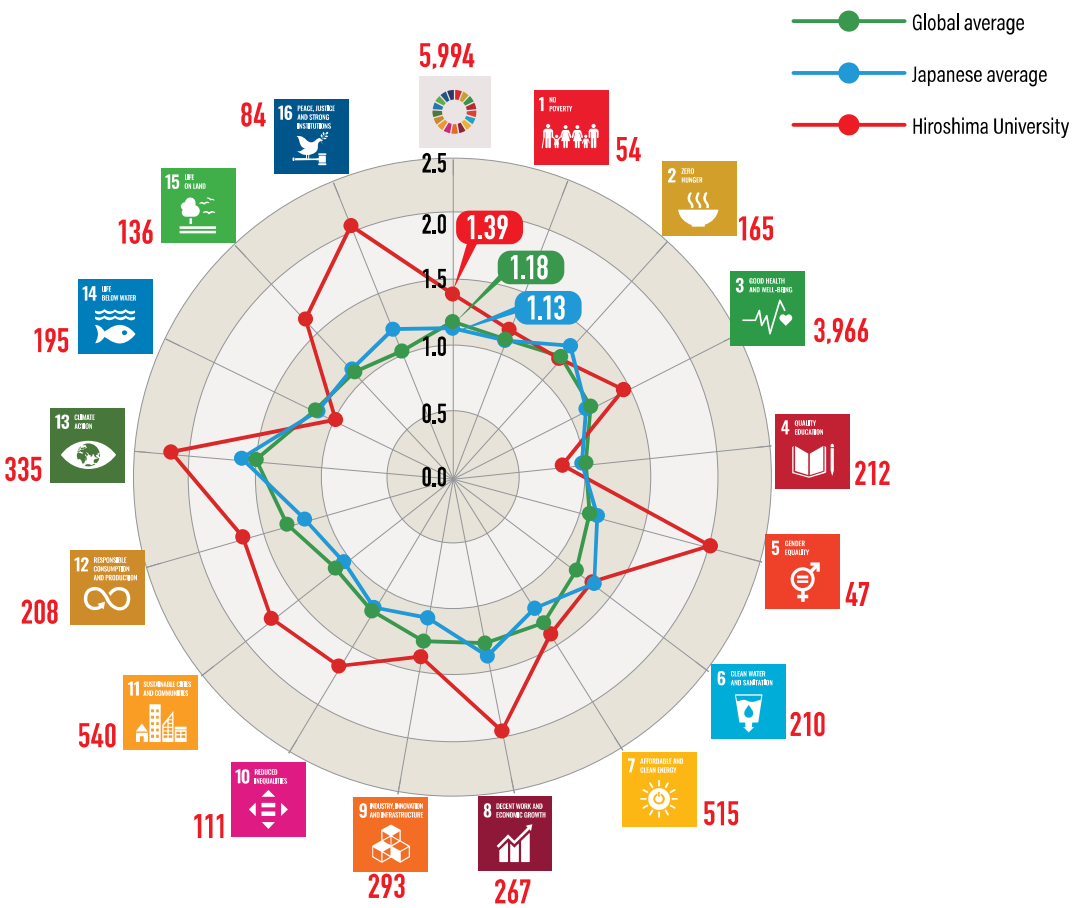
Hiroshima University's Efforts and Outcomes to Achieve the SDGs

High-impact SDGs-related research

The SDGs are said to be a "common language" for measuring social impact. The radar chart below shows the global average and Japanese average of Field-Weighted Citation Impact (FWCI; a metric for the impact of an academic paper based on citations) of SDG-related research outputs and HU's FWCI score thereof. The average FWCI of all papers worldwide, not limited to those related to the SDGs, is indicated as 1; a score higher than 1 means that the paper has been cited more than the global average.
The FWCI of all SDG-related papers from HU published between 2019 and 2023 was 1.39, which exceeded the global average (1.18) and the Japanese average (1.13) of FWCI of SDG-related research outputs. A score of 1.39 means that the citations that the papers have received exceed the global average by 39%, suggesting their high quality.
Furthermore, when seen by each SDG, HU's FWCI score exceeded the global average for 13 of the 16 SDGs. In particular, when compared with its peers among the top 10 Japanese universities in the number of papers concerning SDG 11 (Sustainable Cities and Communities), SDG 13 (Climate Action), and SDG 15 (Life on Land), HU ranked first in FWCI for all those goals. This demonstrates the paramount importance of HU's research on individual SDGs. (Please refer to the next page.)
These results are also reflected in the Times Higher Education (THE) University Impact Rankings 2025, which visualize universities' social contribution using the SDGs as a framework. In the rankings, HU is among the world's top 100 universities in seven SDGs, the highest number in Japan.

FWCI of SDG-related research outcomes

(The figures in red shown under the SDG logos indicate the numbers of papers on the respective SDGs from HU.)



Source: Elsevier's SciVal (as of June 2025)
* Search conditions on article metric scores—Citation database: Scopus; document type: all publication types; self-citation: included
* Since SciVal, a research performance analysis tool provided by Elsevier, excludes papers on SDG 17 from searches, the radar chart only displays FWCI scores for papers concerning SDGs 1 to 16.
* Since one paper may be judged to concern multiple SDGs, the sum of the numbers of papers concerning the respective 16 SDGs does not equal the number of all SDG-related papers.

Hiroshima University's Strengths from the FWCI of SDG-Related Research

* The numbers of papers and FWCI scores are as of 2019 to 2023.
* The top 10 Japanese universities in terms of the number of papers related to each SDG are shown.

	SDG 11			SDG 13			SDG 15		
	University name	Number of related papers	FWCI	University name	Number of related papers	FWCI	University name	Number of related papers	FWCI
1	Hiroshima University	540	1.75	Hiroshima University	335	2.15	Hiroshima University	136	1.64
2	University of Tsukuba	451	1.58	Kyushu University	600	1.86	University of Tsukuba	221	1.42
3	The University of Tokyo	1,705	1.29	Hokkaido University	531	1.77	The University of Tokyo	627	1.37
4	Waseda University	347	1.23	University of Tsukuba	326	1.77	Tohoku University	205	1.28
5	Kyushu University	428	1.20	The University of Tokyo	1,203	1.72	Kyoto University	718	1.24
6	Hokkaido University	395	1.15	Kyoto University	803	1.65	Hokkaido University	442	1.23
7	Nagoya University	427	1.14	Nagoya University	334	1.65	Tokyo University of Agriculture and Technology	132	1.23
8	Tohoku University	760	1.09	Tohoku University	445	1.59	Nagoya University	153	1.10
9	Institute of Science Tokyo	491	1.05	Institute of Science Tokyo	435	1.43	Kobe University	133	1.10
10	Kyoto University	1,050	1.02	The University of Osaka	270	1.25	Kyushu University	244	1.04

SDG11
Sustainable Cities and Communities

SDG13
Climate Action

SDG15
Life on Land

By comparing the FWCI of the top 10 Japanese universities in terms of the number of publications related to SDG 11 (Sustainable Cities and Communities), SDG 13 (Climate Action), and SDG 15 (Life on Land), HU ranked first in all categories. This shows that HU is at a high level in both the quantity and quality of our papers.
Among the papers related to SDG 13, which shows particularly high FWCI, the following article published in Sustainability Science, a journal issued by Springer—one of the world's leading publishers—has been highly cited, and the research is attracting global attention.

Paper Title: Three decades of research on climate change and peace: a bibliometrics analysis
Journal: Sustainability Science
Author: Sharifi, Ayyoob; Simangan, Dahlia; Kaneko, Shinji
DOI: https://doi.org/10.1007/s11625-020-00853-3

This paper is a co-authored article by Professor Ayyoob Sharifi, Associate Professor Dahlia Simangan, and Director Shinji Kaneko, who are core members of the Hiroshima University FE・SDGs Network Hub (NERPS).
Professor Ayyoob Sharifi, the lead author of this paper, was also selected as one of Clarivate's Highly Cited Researchers 2025, announced on November 12, 2025.
The Highly Cited Researchers list recognizes researchers who have published multiple papers ranking in the top 1% by citations in their respective fields and years over the past eleven years, selecting only a limited number of researchers with exceptionally outstanding achievements.
Additionally, Associate Professor Dahlia Simangan has been designated a Distinguished Researcher (DR) at HU, a recognition for young faculty members demonstrating particularly excellent research.
Under the leadership of Director Shinji Kaneko, NERPS has expanded its international network, with core members taking the lead and actively welcoming visiting researchers and other collaborators.
Building on Hiroshima University's strength in "comprehensive knowledge" and collaborating with stakeholders both inside and outside the university, we will continue to promote high-impact research related to the SDGs.

【References】
Hiroshima University professor named among Clarivate's Highly Cited Researchers 2025
(Hiroshima University Official Website)
https://www.hiroshima-u.ac.jp/en/news/94017

The DP/DR Program
(Hiroshima University, Headquarters for Co-creative Future Sciences Website)
https://hcfs.hiroshima-u.ac.jp/en/research-strategy/dp_dr

Hiroshima University's Efforts and Outcomes to Achieve the SDGs

HU ranks 2nd among Japanese universities in THE's Impact Rankings 2025

Hiroshima University secured 2nd place among Japanese universities in THE's 2025 Impact Rankings and was ranked in the global top 100 in seven SDG categories, the most in Japan!

**The THE Impact Rankings are published annually by the UK-based higher education magazine Times Higher Education and assess how universities around the world contribute to the United Nations' Sustainable Development Goals (SDGs).*

Times Higher Education (THE) released its 2025 Impact Rankings on June 18, placing Hiroshima University (HU) in the global top 100 in seven SDG categories, more than any other university in Japan.
In the overall ranking, HU secured 101-200th place among 2,318 universities worldwide, tying with three other universities for second place in Japan. This consistent ranking reflects the university's ongoing efforts in education, research, and social contributions, which have created a synergistic effect between leading university reforms and university-wide efforts to achieve the SDGs.
The seven categories that ranked in the global top 100 and the two items that tied for first place in Japan are as follows:

SDG category	World Ranking	Japan Ranking
SDG 15 (Life on Land)	41st (out of 854 universities)	2nd (out of 39 universities)
SDG 17 (Partnerships for the Goals)	67th (out of 2,389 universities)	2nd (out of 70 universities)
SDG 13 (Climate Action)	68th (out of 1,089 universities)	1st (out of 38 universities)
SDG 1 (No Poverty)	84th (out of 1,267 universities)	2nd (out of 29 universities)
SDG 14 (Life Below Water)	86th (out of 711 universities)	2nd (out of 34 universities)
SDG 9 (Industry, Innovation and Infrastructure)	89th (out of 1,156 universities)	7th (out of 51 universities)
SDG 11 (Sustainable Cities and Communities)	95th (out of 1,154 universities)	1st (out of 51 universities)
SDG 12 (Responsible Consumption and Production)	101-200th (out of 973 universities)	Tied for 1st (out of 44 universities)
SDG 10 (Reduced Inequalities)	201-300th (out of 1,261 universities)	Tied for 1st (out of 30 universities)

One of the key factors behind HU's second-place overall score in Japan was its high evaluation in SDG 15 (Life on Land). In 2024, the Higashi-Hiroshima Campus was certified by Japan's Ministry of the Environment as a "Sustainably Managed Natural Site." HU makes use of the campus's rich natural environment in student education while working to preserve it for future generations. In doing so, the university not only contributes to the achievement of the 30by30 target—which aims to effectively conserve more than 30% of land and sea as healthy ecosystems by 2030—but also promotes sustainable initiatives that balance biodiversity conservation and climate change mitigation.

HU ranked within the global top 100 and achieved sole first place in Japan in two categories—SDG 11 (Sustainable Cities and Communities) and SDG 13 (Climate Action). This marks the second consecutive year that the university has secured the top position in Japan for both categories.

These results reflect HU's continued efforts toward achieving carbon neutrality. In particular, SDG 11 was recognized for initiatives such as the development of Zero Energy Buildings (ZEBs)—buildings designed to achieve a net-zero balance of energy generation and consumption based on sustainable standards.

SDG 13 highlighted the university's increased use of low-carbon energy. Looking ahead, HU plans to further advance these efforts by utilizing the solar power facility installed on the Higashi-Hiroshima Campus as part of a large-scale solar energy project.

HU submitted data for all 17 SDGs and is working to achieve the SDGs in a wide range of fields.

Hiroshima University Wins Grand Prizes at THE Awards Asia 2025

Award ceremony scene:
International Strategy of the Year

Award ceremony scene: Outstanding Contribution to Environmental Leadership

Japan's First Dual Award Winner:
Exceptional Initiatives Recognized on the Asian Stage

Hiroshima University has been awarded its first-ever Grand Prizes at the THE Awards Asia 2025, an annual program organized by the UK-based magazine focused on news and issues in higher education, Times Higher Education to recognize exceptional reform efforts by universities across Asia. Among more than 500 entries submitted by institutions throughout the region, Hiroshima University was honored in two of the ten award categories for its outstanding initiatives. This marks a historic achievement, as Hiroshima University becomes the first Japanese institution to receive Grand Prizes in two categories. Across all participating institutions, this represents only the third time such an achievement has been made—following Tsinghua University in China and the National University of Singapore.

❶ International Strategy of the Year

This award is presented to institutions that have demonstrated exceptional success in building international partnerships, launching overseas initiatives, and strategically attracting international students and faculty. Hiroshima University was recognized for its international engagement through initiatives such as the Peace Study Tour, which invites students from partner institutions around the world to learn about peace education root Hiroshima's historical legacy, and the University Presidents for Peace Conference, which brings together global university leaders to foster a network for exploring conflict resolution and sustainability.

❷Outstanding Contribution to Environmental Leadership

This award honors institutions that have shown clear leadership in addressing environmental challenges through innovative approaches. Hiroshima University was recognized for its comprehensive and forward-thinking environmental initiatives, including the declaration of the Carbon Neutral x Smart Campus 5.0 Initiative, a multi-faceted and practical approach to sustainability, the development of dedicated courses and programs for all students, collaboration with Nissan Motor Corporation on electric vehicle initiatives, and the implementation of concrete steps toward achieving carbon neutrality by 2030.

The Grand Prizes were announced on Tuesday, April 22, 2025, at the THE Awards Asia 2025 Ceremony held in Macau. Hiroshima University was represented at the event by Executive Vice President for Global Initiatives, Dr. Kaneko, along with several university officials. Looking ahead, Hiroshima University remains committed to contributing visibly to the global community by striving toward the achievement of the SDGs by 2030 and the broader goal of creating a peaceful and sustainable world.

THE Awards Asia Recognized Categories: Grand Prize and Finalist selections for Hiroshima University

Year	Category
2021	THE DataPoints Social Impact Award
2022	International Strategy of the Year
2023	International Strategy of the Year
	Student Recruitment Campaign of the Year
2024	International Strategy of the Year
	Outstanding Contribution to Regional Development
2025	★International Strategy of the Year
	Leadership and Management Team of the Year
	★Outstanding Contribution to Environmental Leadership
	Research Project of the Year: Arts, Humanities and Social Sciences

★ indicates a Grand Prize award

See also: THE Homepage Times Higher Education Awards Asia 2025: winners announced
https://www.timeshighereducation.com/news/times-higher-education-awards-asia-2025-winners-announced

Awarded Trophies - Hiroshima University at THE Awards Asia 2025
Right Outstanding Contribution to Environmental Leadership
Left International Strategy of the Year

Hiroshima University's Efforts and Outcomes to Achieve the SDGs

Search for Researchers on SDGs / Hiroshima University Researcher Directory

This is a system for searching the areas of expertise and research achievements of approximately 2,144 researchers affiliated with Hiroshima University, using categories such as 'SDGs Goals,' 'Genre,' 'Field,' or 'Alphabetical Order'.

https://www.guidebook.hiroshima-u.ac.jp/

The Sustainable Everyday Peacemaking Research and Impact Consortium was officially launched at Hiroshima University

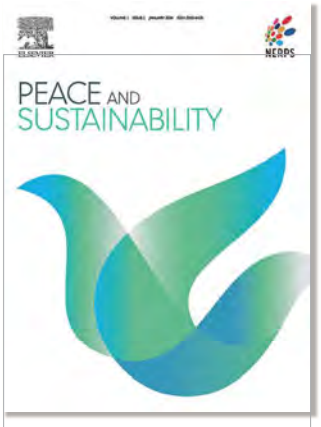
The Sustainable Everyday Peacemaking Research and Impact Consortium was officially launched at Hiroshima University on July 31, 2025. The consortium brings together four research-intensive and impact-driven universities – the University of Manchester, Hiroshima University, Osaka University, and the University of Tokyo – to form a dynamic and collaborative platform dedicated to fostering just, inclusive, and equitable local communities as a foundation for sustainable everyday peace. Scholars and experts with deep specialization in the multidimensional and multilevel issues shaping the everyday peace of ordinary people will examine five interrelated thematic approaches to peacemaking: affective, environmental, gendered, institutional, and historico-legal. By integrating scholarly, policy, and technical expertise, the Consortium aims to advance locally attuned, diverse, and inclusive conceptions and practices of everyday peacemaking. Central to this mission is the commitment to foreground the lived experiences, differentiated vulnerabilities, and peace aspirations of communities across Manchester, Hiroshima, Osaka, and Tokyo in all its research, programs, and initiatives. Dr. Michael Magcamit of the University of Manchester leads this initiative, and Prof. Mari Katayanagi and Dr. Dahlia Simangan, together with their PhD students, represent Hiroshima University in this consortium

Hiroshima University participated in the discussions at the Climate Change and Environmental Research Workshop held in Hanoi, Viet Nam

Dr. Dahlia Simangan, together with her students, was invited to present their research on climate change impacts on disasters, cooperation, and security. Over 100 delegates from government agencies, universities, embassies, international organizations, and local communities engaged in a one-day research workshop aimed at understanding climate vulnerabilities and exploring pathways for interdisciplinary collaboration. Dr. Simangan shared some of the interdisciplinary and transdisciplinary initiatives by NERPS and the research landscape on climate change and security in Viet Nam. Her students presented their research projects on the prospects for environmental cooperation in Central Asia and challenges to gender-inclusive disaster risk reduction in Nepal. The event was organized by the University of Science, World Vision International in Viet Nam, and Natural Science Co., VNU University of Science (HUSCO).

Peace and Sustainability, the official journal of NERPS, has published its inaugural issue

In time for the NERPS 2025 Conference, the Peace and Sustainability journal published its inaugural issue with seven articles, including the first editorial. The topics covered are on citizens' assemblies in addressing complex issues, partnership and cooperation in the Norden and Mediterranean, conflict and environmental degradation in Colombia, the use of AI for climate security, and the role of academia in promoting peace and sustainability. The collection also includes an agenda-setting paper co-authored by NERPS members and prominent scholars working on the intersection of peace and sustainability. The paper calls for interdisciplinary and transdisciplinary research on the following crucial topics for the nexus: Anthropocene, disasters, migration, oceans, water, heritage, cities, food, geoengineering, gender, justice, and plurality. We invite Hiroshima University researchers and their network to consider the journal for disseminating their work. Please visit the journal's homepage for more information.



https://www.sciencedirect.com/journal/peace-and-sustainability

Initiatives in Collaboration with Overseas Universities

Peace Presidents' Conference

As global efforts toward achieving the Sustainable Development Goals (SDGs) continue to intensify, the role of universities is becoming ever more significant. Building a peaceful and sustainable future requires the cultivation of individuals with diverse perspectives and deep mutual understanding. Through education and research, universities play a vital role in nurturing future leaders who can respond to global challenges. Against this backdrop, Hiroshima University has been convening the Peace Presidents' Conference, bringing together leaders from prominent universities around the world to promote dialogue and collaboration for peace.

The First Peace Presidents' Conference

The First Peace Presidents' Conference was held on August 6, 2024, the anniversary of the atomic bombing of Hiroshima. This symbolic date underscored the conference's commitment to peace and sustainability. (For further details, please refer to page 14 of the Hiroshima University SDGs Report 2024.)

The Second Peace Presidents' Conference

On November 25, 2024, Hiroshima University hosted the Hiroshima University Africa Day: Peace Presidents' Conference – Africa Chapter at the Higashi-Senda Campus. The conference welcomed approximately 20 participants from African higher education institutions, including the President of the Pan African University and the President of Tlemcen University. All participants shared their support for the principles of the Peace Presidents' Declaration adopted at the inaugural conference in August.

Speaking on behalf of the African participants, President Jean Koulidiati of the Pan African University expressed his expectation that the newly concluded agreement with Hiroshima University would represent a significant step forward. He highlighted the importance of creating opportunities for students to study in Hiroshima as a means of contributing to peaceful and inclusive societies and advancing sustainable development. He also emphasized his strong commitment to concrete future actions and the expansion of institutional collaboration.

During the meeting, participating university presidents introduced the unique characteristics of their respective campuses, as well as their initiatives related to peace and sustainability. Lively discussions followed, focusing on the potential for expanding future cooperation between African universities and Hiroshima University.

The Third Peace Presidents' Conference

On March 21, 2025, the Third Peace Presidents' Conference was held at the Rihga Royal Hotel Hiroshima.

The conference brought together approximately 40 participants, including presidents and vice presidents, from 12 universities in 11 countries (including Hiroshima University) that jointly implement international exchange programs—primarily student exchanges—under the Ministry of Education, Culture, Sports, Science and Technology (MEXT)–supported Inter-University Exchange Project (※). All participating institutions expressed their support for the principles of the Peace Presidents' Declaration adopted at the Peace Presidents' Conference. Mr. Watanabe, Director-General for International Affairs at MEXT, also attended the meeting.

During the conference, representatives from each university introduced their respective initiatives related to peace and sustainability and engaged in discussions on expanding future collaboration in international student exchange.

At the conclusion of the meeting, the Third Peace Presidents' Declaration: Partner Universities under the Inter-University Exchange Project was read aloud by President Ochi and unanimously adopted.

On the same day, a public outreach event titled "Introducing Universities Around the World Connected by Hiroshima University" was held at a hotel in Hiroshima City for high school students and members of the general public. A total of 113 people participated in the event, where representatives from 11 universities in 10 countries—who were visiting Japan to attend the Third Peace Presidents' Conference—introduced the distinctive features and strengths of their respective institutions.

Hiroshima University's Efforts and Outcomes to Achieve the SDGs

*Inter-University Exchange Project
The Inter-University Exchange Project is a subsidy program administered by Japan's Ministry of Education, Culture, Sports, Science and Technology (MEXT). Its aim is to promote the development of globally competent human resources and to strengthen the international presence of Japanese universities by supporting outbound study abroad for Japanese students and the acceptance of international students. Each year, strategically important countries and regions are designated as focus areas under the program.
Hiroshima University has successfully applied for and been selected under this program for five consecutive years. Through this initiative, the University actively promotes student and researcher exchanges with universities around the world and works to build and expand international academic exchange networks.

The Fourth Peace Presidents' Conference

Marking the 80th anniversary of the atomic bombing, Hiroshima University hosted the Fourth Peace Presidents' Conference on August 6, 2025, at the Higashi-Senda Campus. The conference brought together approximately 30 participants, including presidents and vice presidents, from 12 universities in nine countries and regions worldwide (including Hiroshima University) that share support for the principles of the Peace Presidents' Declaration. Participants engaged in discussions on the role of universities in promoting peace and sustainability.
On the morning of August 5, the day prior to the conference, presidents and representatives from overseas universities visited the Hiroshima Peace Memorial Park and the Hiroshima Peace Memorial Museum. In the afternoon, they attended a peace charity concert held at Hiroshima University's Higashi-Hiroshima Campus.
On the day of the conference, participants first attended the Hiroshima Peace Memorial Ceremony at Peace Memorial Park, after which they traveled to Hiroshima University's Higashi-Senda Campus to take part in the Hiroshima University Memorial Service for the Atomic Bomb Victims.
The conference opened with presentations by the presidents of each participating university on their initiatives related to peace and sustainability. This was followed by an exchange of views on efforts to cultivate leaders who can contribute to building a peaceful and sustainable future, as well as initiatives aimed at creating international exchange opportunities for students and early-career researchers.
Toward the conclusion of the meeting, President Ochi read aloud the Peace Presidents' Declaration – On the Occasion of the 80th Anniversary of the Atomic Bombing, which was formally adopted.

Participating Universities in the Peace Presidents' Conference
●**Japan**: Hiroshima University; United Nations University; Fukushima Medical University ●**United States:** University of Idaho; Arizona State University; Columbia University ●**Taiwan: National** Cheng Kung University; National Central University ●**Indonesia:** Hasanuddin University; Indonesia University of Education ●**Malaysia**: Tunku Abdul Rahman University (UTAR) ●**Thailand**: Kasetsart University ●**India:** Indian Institute of Technology Bombay; Birla Institute of Technology and Science, Pilani ●**Italy**: University of Pavia; University for Foreigners of Perugia ●**Austria:** University of Graz ●**Sweden:** World Maritime University ●**Germany**: Leipzig University ●**Spain:** University of the Basque Country ●**United** Kingdom: The University of Sheffield ●**Egypt:** Cairo University; Egypt-Japan University of Science and Technology (E-JUST) ●**Malawi:** University of Malawi ●**Zambia:** University of Zambia ●**Pan African University, Algeria Campus** (PAUWES: Water and Energy Sciences) ●**Pan African University, Kenya Campus** (PAUSTI: Basic Sciences, Engineering and Innovation) ●**Pan African University, Cameroon Campus** (PAUGHSS: Governance, Humanities and Social Sciences) ●**Pan African University, Nigeria Campus** (PAULESI: Life and Earth Sciences) University of Tlemcen (Algeria)

140 university students from 17 countries around the world gathered in Hiroshima! Peace Study Tour 2025

A joint summer program with the Sasakawa Peace Foundation and Columbia University

In this milestone year marking the 80th anniversary of the atomic bombing, Hiroshima University held the Peace Study Tour 2025. Timed to coincide with the Peace Memorial Day on August 6, this program invites students from partner institutions and other universities around the world to Hiroshima to participate in a series of summer programs centered on diverse global themes.
Now in its third year, the program welcomed 140 students from 37 universities across 17 countries, who joined 83 Hiroshima University students to take part in six specialized summer programs. Each program addressed contemporary global challenges such as nuclear disarmament and non-proliferation, sustainable resource management and positive peace, the social role of artificial intelligence (AI), diversity and inclusion, AI applications in maritime and ocean fields, and the circular economy. The programs ran for about 10 days to two weeks between early August and mid-September.
Participants from around the world engaged in lectures by experts and practitioners, field visits, group work, and discussions—tackling global issues from multidisciplinary perspectives while actively exchanging ideas on peacebuilding.
From August 4 to 6, a cross-program Peace Learning component was also held. In addition to the annual activities—listening to testimonies from atomic bomb survivors (hibakusha), visiting the Hiroshima Peace Memorial Museum, and attending the Peace Memorial Ceremony—this year's program featured a special lecture by Mr. Toshiyuki Mimaki, Chairperson of Nihon Hidankyo, which received the Nobel Peace Prize in 2024. Mr. Mimaki shared his personal experience as a survivor and his lifelong commitment to peace. His talk provided students with a profound opportunity to reflect on the horrors of war, Hiroshima's path to peace, and the city's remarkable recovery—leaving a lasting impression on all participants.

Students from abroad offered a wide range of reflections, including:
"The Hiroshima location is a perfect place to conduct this program because also of its significant contribution to peace and it is a history itself of reconstruction after the atomic bomb explosion. This also made me realize that peace and reconstruction is attainable given also that the community where I can from is in its reconstruction phase, maybe this learning could be applied in my community where I was currently working and staying. Also, this is a personal walk towards inner peace after my experience of bomb explosion incident. It helps me a lot in trying to resolve that traumatic experience and somehow find peace from within."
"To have that many people from diverse background initially felt we might disagree to many of things that was going to happen in the program and particularly issues happening around the world. But it went quite well. There were many things to learn, for instances, learning, respecting, and acknowledging one's culture and their opinions because we all live different realities, therefore different experiences. Moreover, living in coexistence with nature is one of the most things that we learned for sustainable and peaceful development of the world."
"I learned that peace is not only about ending conflict but also about building respect, trust, and care for each other and the environment. I hope to use this experience to promote values of harmony with nature, respect for community, and peaceful dialogue to address cultural preservation and environmental challenges in my region."
"Hiroshima has been the most significant, not just because of its history but because of its gradual reconstruction of not just infrastructure development but also development of people emotionally and psychologically. This city is the reflection of collective consciousness and determination for better future."
These reflections indicate that the students actively considered the significance of peace and gained a wide range of learning experiences.
In a world where conflicts and wars still persist, Hiroshima University strongly believes that providing opportunities for students from across the globe to gather, learn, and engage in dialogue through international exchange is one of the most important missions of a university. Moving forward, we will continue to share the reality of the atomic bombing with students visiting Hiroshima and offer meaningful learning opportunities that inspire them to think deeply and take action toward peace and sustainability.

●Programs for FY2025

Programs	Theme	Date	Number of participants
INU Student Seminar	Nuclear Disarmament and Non-Proliferation	August 2-10, 2025	53 [Breakdown] Hiroshima University (32)9 INU Member Universities (21)
HU&SPF&CU Summer Course on Peace and Sustainability 2025	Conflict and Collaboration in Natural Resource Management – Advancing Positive Peace and the SDGs	August 2-10, 2025	42 [Breakdown] Hiroshima University (9) Columbia University (9) Sasakawa Peace Foundation (14) Hiroshima University Partner Universities (10)
Japan-U.S. Global Leadership Program	The role of artificial intelligence in the future of work and society	August 2-11, 2025	47 [Breakdown] Hiroshima University (15) Arizona State University (14) Purdue University (7) University of Texas at Austin (11)
Campus Asia Summer School	Fostering an Inclusive Mindset: Developing International Collaborative Human Resources in the Asia Region	August 19-27, 2025	25 [Breakdown] Hiroshima University (9) Beijing Normal University (3) Changchun University (1) Hankuk University of Foreign Studies (6) Kasetsart University (3) Universitas Pendidikan Indonesia (3)
AI in Maritime Economic Security and Sustainabilit	AI Applications in Maritime and Ocean Studies	August 19-September 3, 2025	16 [Breakdown] Hiroshima University (10) World Marine University (2) Ca' Foscari University of Venice (2) University of the Basque Country (2) Leipzig University (2)
AGILE Workshop	Circular Economy	September 1-12, 2025	40 [Breakdown] Hiroshima University (10) The University of Sheffield (5) UNSW Sydney (The University of New South Wales) (15) Birla Institute of Technology and Science, Pilani (5) Indian Institute of Management Bangalore (5)

●Participants' Affiliated Universities

	Affiliated University	Country
1	Arizona State University	U.S.A.
2	Columbia University	U.S.A.
3	James Madison University	U.S.A.
4	University of Texas at Austin	U.S.A.
5	Purdue University	U.S.A.
6	University of Idaho	U.S.A
7	Universidad Nacional	Argentina
8	Kingston University	U.K.
9	The University of Sheffield	U.K.
10	Ca' Foscari University of Venice	Italy
11	University of Perugia	Italy
12	Indian Institute Of Management–Bangalore	India
13	North Eastern Hill University	India
14	Birla Institute of Technology And Science, Pilani	India
15	Rajiv Gandhi University	India
16	Universitas Pendidikan Indonesia	Indonesia
17	Syarif Hidayatullah State Islamic University	Indonesia
18	Parahyangan Catholic University	Indonesia
19	Hasanuddin University	Indnesia
20	University of Graz	Austria

	Affiliated University	Country
21	The University of New South Wales	Australia
22	Hankuk University of Foreign Studies	Korea
23	World Maritime University	Sweden
24	Malmö University	Sweden
25	University of the Basque Country	Spain
26	Rovira i Virgili University	Spain
27	Kasetsart University	Thailand
28	Chiang Mai University	Thailand
29	Changchun University	China
30	Beijing Normal University	China
31	European University Viadrina	Germany
32	Osnabrück University	Germany
33	Leipzig University	Germany
34	Ateneo de Manila University	Philippines
35	Mindanao State University	Philippines
36	Stellenbosch University	South Africa
37	Yarmouk University	Jordan


HU&SPF&CU Summer Course on Peace and Sustainability 2025


INU Student Seminar


Campus Asia Summer School


Japan-U.S. Global Leadership Program


AI in Maritime Economic Security and Sustainability


AGILE Workshop

Hiroshima University's Efforts and Outcomes to Achieve the SDGs

NERPS Initiatives and Activities

❶ Planning and Organizing Webinar Series

YouTube
Hiroshima
NERPS

Since September 2020, NERPS has been organizing and hosting a series of webinars intended to consider peace and sustainability from the perspectives of global environmental, sociopolitical, economic, and technological transformations.
This series is situated within the urgent need to deal with the implications of global change, including the COVID-19 pandemic, for peace and sustainability. The webinars serve as a platform for rethinking and updating the current discourse on peace and sustainability amidst these global challenges and transformations. Leading experts discuss the role of resources, digital technologies, migration, governance, and education in peacebuilding, conflict mitigation, humanitarian aid, and capacity-building, among other components that contribute to the achievement of the Sustainability Development Goals, particularly that of Goal 16 on Peace, Justice, and Strong Institutions.
The first webinar featured Professor Jeffrey D. Sachs of Columbia University in the City of New York in the United States, who was the awardee of the Blue Planet Award 2015 and a two-time consecutive nominee for TIME magazine's 100 most influential people in the world, speaking from New York. A total of 40 NERPS webinars have been held up to July 31, 2025.

RECORDS

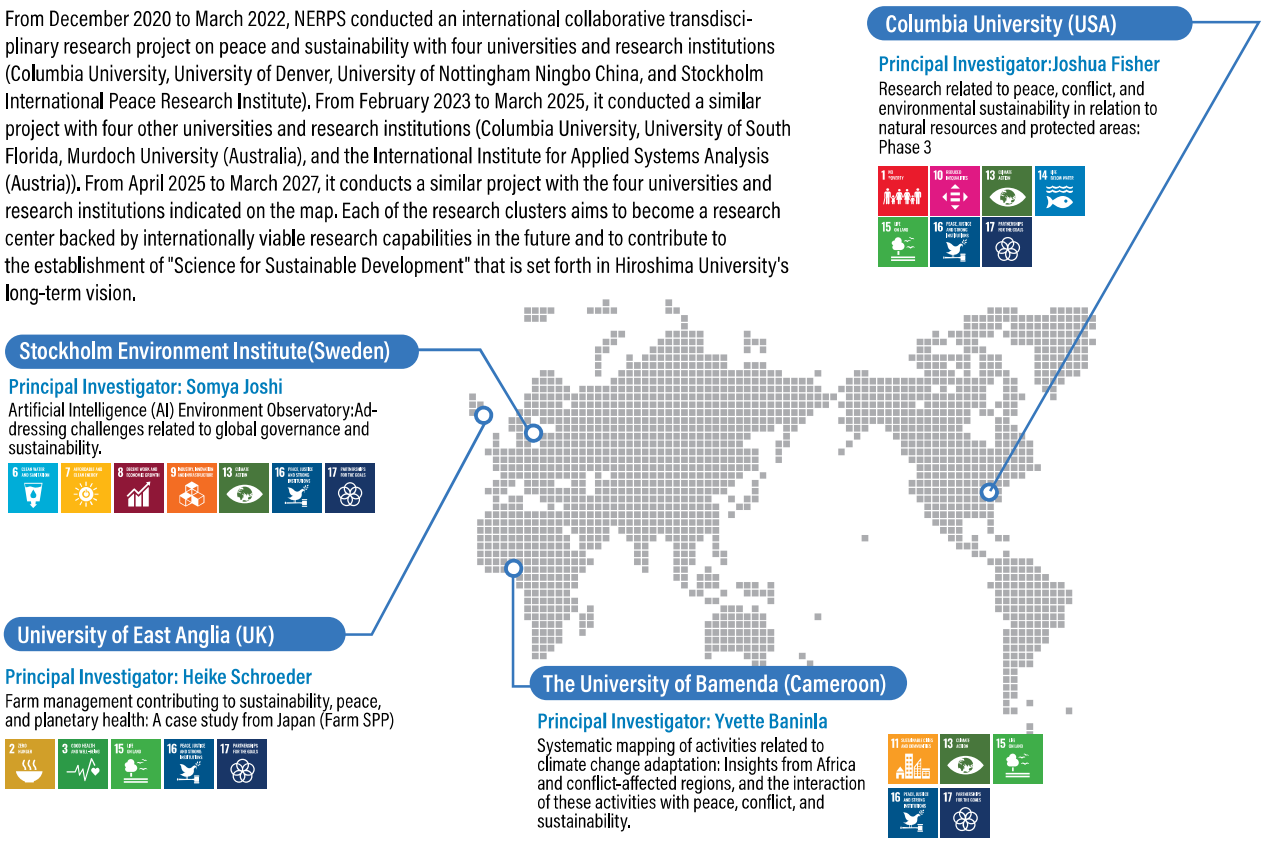
Date	Speaker	Title	Number of participants on the day	Number of Video views (As of 2025/07/31)
2020/9/23	Dr. Jeffrey D. Sachs	Sustainable development as a path to peace	180	422
2020/11/25	Prof. Cullen Hendrix	Promoting Peace through Shared Governance of the Seas	23	141
2020/12/16	Prof. Paul Heidebrecht	PeaceTech and the Prospects for Critically Engaging Technology to Advance Peace and Sustainability	89	115
2021/1/28	Prof. Joshua Fisher, Ms. Sophia Rhee	Protected Area Management & Natural Resource Governance-Exploring Pathways for Environmental Peacebuilding	79	1205
2021/2/12	Dr. Florian Krampe	Peace and Sustainability in the Anthropocene: Meeting the evolving peace requirements of post-conflict societies	99	587
2021/2/26	Prof. Ali Cheshmehzangi	Sustaining the City's Continuity and Enhancing Resilience in facing the COVID-19 Pandemic	98	170
2021/3/18	Dr. Andrea Bartoli	Initiative for Peace in South Sudan-Insights from the Work of the Community of Sant'Egidio	40	139
2021/4/9	Prof. Joyashree Roy	SDG framework as core of development diplomacy: Juxtaposing climate action and peace through soft power diplomacy	39	230
2021/4/15	Mr. Steve Killelea	Ecological Threats, Peace, and COVID-19	58	179
2021/5/20	Prof. Frank Biermann	Earth System Governance for Sustainable Development and Peace	102	336
2021/6/17	Prof. Takako Izumi	Disaster Risk Reduction under Conflict Situation	30	219
2021/7/29	Prof. Richard Friend	Democratising Science and Research to Address Environmental Conflict	27	118
2021/11/5	Dr. Anders Karlsson	The Power of Data to Advance the SDGs	30	131
2022/1/27	Dr. Yvette Baninla	The State of Climate Change Research in Africa	44	214
2022/2/3	Prof. Akiko Yuge	United Nations 75th Anniversary Declaration, "Our Common Agenda", and the SDG	23	280
2022/5/25	Prof.Dominique Steiler	From Economic War to a Culture of Economic Peace	26	123
2022/7/27	Prof. Francisco A. Magno	Watershed Conflict and Collaboration in the Philippines	35	150
2022/9/8	Prof. Ricardo Hirata	Integrated Water Solutions for Cities Resilient to Global Climate Change	50	174
2022/10/18	Dr. Srinjoy Bose & Dr. Dahlia Simangan	Positive Peace and Environmental Sustainability: Local Dynamics in Conflict-Affected Societies	17	Not made available for public viewing
2022/12/2	Dr. Xuemei Bai	Urbanization and Urban System Sustainability in the Anthropocene	45	90
2022/12/7	Dr. Hiwa Asadpour	Minority languages and inter-ethnic peace through a linguistic perspective	18	85
2023/1/18	Prof. Henrik Österblom	Exploring Unexpected Collaboration to Advance Biosphere Stewardship	33	64
2023/6/23	Dr. Katherine Alfredo	Drinking Water Sustainability and Source Selection	72	85

Date	Speaker	Title	Number of participants on the day	Number of Video views (As of 2025/07/31)
2023/9/21	Dr. Vincenzo Bollettino	Understanding Filipino's Perspectives on and Experience with Climate Change and Disasters	95	27
2023/11/24	Prof. Israr Qureshi	Digitally Enabled Social Intermediation: A Research Framework	89	3
2023/11/27	H.E. Mr. Korkut Güngen	TÜRKİYE: WEST OF ASIA – EAST OF EUROPE	66	Not Published
2023/12/5	Dr. Ali Kharrazi	Systems Thinking and Ecological Approaches for Evaluating Risk and Resilience	80	57
2024/1/19	Prof. Yie-Ru Chiu	Fostering Sustainable Communities: A Permaculture Approach at Tzu Chi University, Taiwan	60	51
2024/2/7	Dr. Tobias Ide	Disasters, Armed Conflicts, and Rebel Governance	63	95
2024/3/14	Prof. Teresa Eugénio	The challenges of sustainability and non-financial reporting	58	84
2024/3/14	Dr. Prakash Bhattarai	From the Peace Agreement to Constitution Making: Nepal's Journey to Peace, Justice and Strong Institutions	28	101
2024/6/26	Dr. Shailendra K. Mandal	Impact of Climate Change on Hydroclimatic and other Climatic Risks and Vulnerability: Strategies for Resource Constrained Smart City of India	58	31
2024/9/6	Dr.Nick Brown Dr. Spyros Schismenos	3+1 Questions about Humanitarian Engineering	25	66
2024/9/20	HH Princess Abeer Al Saud	Peace-based Approaches for Desertification: Revisiting UNCCD's Policies and Practices	34	39
2024/10/24	Dr. Dewan Ashraf	Warming in Major Asian Cities: Are We Prepared to Live with 50 °C	42	47
2025 /02/21	Dr. Maria Isabel Irurita	The role of social business in creating a peaceful and reconciled society the case of Colombia.	36	25
2025 /04/09	Dr. Vanesa Giraldo Dr. Inge Valencia	Making Peace with Nature: Contributions on Environmental Justice and Peacebuilding from Colombia	47	66
2025 /05/13	Dr.Sara Balestri	Climate change, vulnerability and civil conflicts: what are the pathways?	37	53
2025 /06/26	Dr. Nzalalemba Serge Kubanza	Some Happy, Others Sad: Exploring Environmental Justice in Solid Waste Management in Kinshasa, the Democratic Republic of Congo	40	139
2025 /07/31	Dr. Somya Josh	Global Governance of AI: A case for Planetary Health	55	17

2 Transdisciplinary Research Projects

Transdisciplinary Research Projects Aiming to Form Globally Recognized Research Clusters

From December 2020 to March 2022, NERPS conducted an international collaborative transdisciplinary research project on peace and sustainability with four universities and research institutions (Columbia University, University of Denver, University of Nottingham Ningbo China, and Stockholm International Peace Research Institute). From February 2023 to March 2025, it conducted a similar project with four other universities and research institutions (Columbia University, University of South Florida, Murdoch University (Australia), and the International Institute for Applied Systems Analysis (Austria)). From April 2025 to March 2027, it conducts a similar project with the four universities and research institutions indicated on the map. Each of the research clusters aims to become a research center backed by internationally viable research capabilities in the future and to contribute to the establishment of "Science for Sustainable Development" that is set forth in Hiroshima University's long-term vision.



Hiroshima University's Efforts and Outcomes to Achieve the SDGs

A Brief Report on the NERPS 2025 Conference in Manila

The Network for Education and Research on Peace and Sustainability (NERPS) at Hiroshima University, in collaboration with De La Salle University (DLSU) in the Philippines, held the 2025 NERPS International Conference at DLSU's Manila campus from March 5 to 7, 2025. This international conference was the fourth in a series of annual academic conferences on peace and sustainability organized by NERPS since 2022, and it aimed to bring together students, researchers, and practitioners to foster partnerships for transdisciplinary research and collaboration toward a peaceful and sustainable future.

At the opening ceremony on March 5, Br. Bernard Oca FSC, President of De La Salle University, delivered a welcoming address. Following this, Shinji Kaneko, Executive Vice President (Global Affairs) of Hiroshima University, NERPS Director and Chair of the conference, outlined the purpose and significance of the event and announced that he hoped some of the papers submitted to the conference would be published in *Peace and Sustainability*, an international academic journal that NERPS launched in collaboration with Elsevier in August 2024.

Next, Undersecretary Carlos Primo David of the Philippine Department of Environment and Natural Resources (DENR) and Deputy Chief of Mission and Consul General Takahiro Hanada of the Japanese Embassy in the Philippines shared their expectations for the outcomes of the international conference and presented their respective initiatives. In particular, Deputy Chief of Mission Hanada highlighted the peacebuilding and development activities that the Japanese government is implementing in Mindanao. Afterwards, in his keynote speech, Rector Tshilidzi Marwala of the United Nations University emphasized the importance of partnerships in achieving the Sustainable Development Goals. Prof.Dr.Alvin Culaba, a member of the Philippines National Commission for UNESCO, delivered a presentation introducing UNESCO's activities in the Philippines.
The international conference was attended by 186 researchers, practitioners, and students from 65 universities and research institutions across 20 countries. Scholarships were awarded to 12 students from developing countries. From the afternoon of March 5 to the morning of March 7, a wide range of research presentations, expert roundtable discussions, and innovative workshops were conducted, comprising a total of 41 parallel sessions and 158 oral presentations. Thirteen universities and institutions participated as partner organizations, contributing to the planning and execution of conference sessions.

The event was successfully conducted and received the nominal support of the Japanese Embassy in the Philippines.
From Hiroshima University, Professor Ayyoob Sharifi and Associate Professor Dahlia Simangan of the IDEC Institute participated as Co-Chairs and Session Chairs of the international conference. Professor Mari Katayanagi, Assistant Professor Johann Caro-Burnett , and Assistant Professor Nguyen Thi Xuan Trinh of the Graduate School of Humanities and Social Sciences also participated as session chairs and presenters, while 54 students took part as presenters.

At the closing ceremony held on March 7, Co-Chairs Professor Ayyoob Sharifi and Associate Professor Dahlia Simangan presented awards for outstanding papers and oral presentations to 8 recipients.

(Note 1)
East Asia: Japan, China, Taiwan
Southeast Asia: Indonesia, Philippines, Thailand, Vietnam
South Asia: Bangladesh, India, Nepal
Europe: Austria, Switzerland, Finland, Netherlands
North America: Canada, United States
Sub-Saharan Africa: Kenya, South Africa

(Note 2)
Japanese Universities/Institutions: Kyushu University Urban Research Center,
Tohoku University Policy Design Research Center
Overseas Universities/Institutions: Columbia University,
University of South Florida, Asian Institute of Technology (Thailand),
Center for Social Transformation (Nepal), Murdoch University (Australia),
University of Queensland (Australia), Davao del Norte State University (Philippines),
Lakehead University (Canada), Earth System Governance (Netherlands),
University for Foreigners of Perugia (Italy)
International Organizations: United Nations University
Publisher: Elsevier

Hiroshima University's efforts and results towards achieving the SDGs

Establishing a city development base that brings together the university and the local community

"Sustainable regional development and university evolution" through urban development that brings together the university and the local community

The "Town & Gown Initiative" Aiming to Realize a New Model for Regional Revitalization

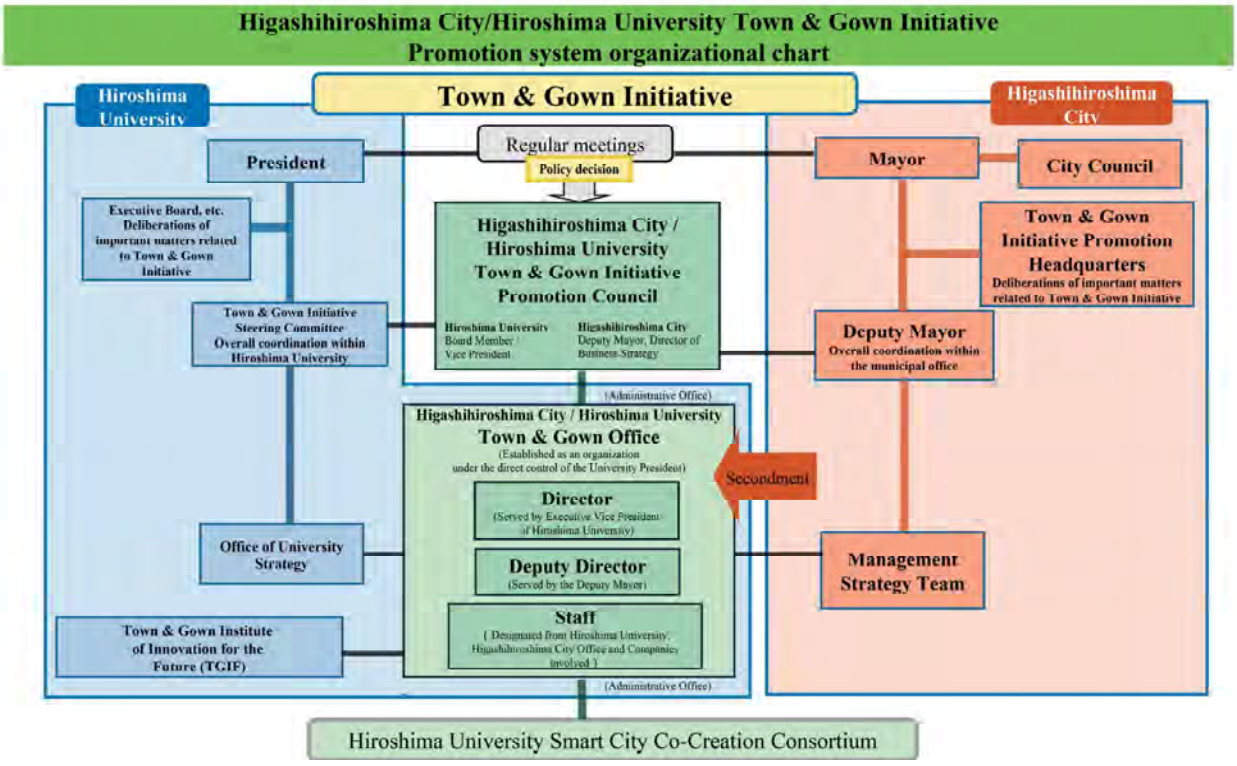
To energize Japan from the regional level, the Town & Gown Initiative aims to create a framework in which universities and the municipalities where they are located share a common vision for a sustainable future and build comprehensive, everyday, continuous, and organizational partnerships. By integrating and utilizing the administrative resources of municipalities with the educational and research resources of universities, the initiative promotes the social implementation of science and technology innovation that contributes to solving regional challenges through the creation of a place for regional co-creation (*) for the social implementation of science and technology innovation that contributes to solving local issues and the development of human resources, and to achieve sustainable regional development and the evolution of the university. This is the "Town & Gown Initiative," and the promotion organization jointly established by Hiroshima University and Higashihiroshima City as a pioneering initiative is the "Higashihiroshima-City/Hiroshima University Town & Gown Office."

* An industry-academia-government-private sector collaboration ecosystem that connects local governments, universities, private companies, entrepreneurs, investors, and citizens.

Left: Mayor of Higashihiroshima-City, Hironori Takagaki,
Right: President of Hiroshima University, Mitsuo Ochi

What is the Town & Gown Office?

The Town & Gown Office is an organizational model commonly introduced in university cities in Europe and the United States. It serves as a hub that promotes collaboration between the town (local community) and the gown (university) with the aim of advancing community development through close university–community cooperation and addressing regional challenges, including achieving the Sustainable Development Goals (SDGs).
In this partnership, Higashihiroshima-City provides various administrative data and identifies local challenges, while Hiroshima University contributes its latest academic knowledge and research capabilities. Through the Higashihiroshima-City–Hiroshima University Town & Gown Office, both parties work closely together to address societal challenges.
To support this collaboration, the Mayor and the President of the University share a common vision for community development. A framework has also been established to promote integrated initiatives through mechanisms such as staff exchanges and cross-appointments, enabling both institutions to jointly advance projects.



Establishment of a foundation for research on the social implementation of smart cities

The Hiroshima University Smart City Co-Creation Consortium, which was established in March 2022, proposed projects related to research and development (R&D) that will lead to the formation of smart cities, as well as the development of a common infrastructure for research and development (demonstration field development on campus). The Consortium carries out research on social implementation of various initiatives that include TGO App, multilingual communication infrastructure, 360° campus views, 3D modeling of the entire campus, human flow analysis platform, and carbon neutrality/energy x mobility infrastructure.

●TGO App

The TGO App aims to create an environment (an innovation platform) where new digital services that enhance citizens' convenience can be continuously developed by establishing a data integration platform that enables open data utilization among industry, academia, and government. Based on the architecture and application/environment developed in FY2021, new features were added in FY2022 assuming daily use by members of Hiroshima University. These include a community function, event function, and a My Page function that allows users to freely register their personal information. The smartphone application was officially launched in April 2023. With the aim of promoting wider use of the app and eventually expanding it to citizens, new initiatives have been introduced. Since December 2023, users have been able to register for services such as the EV car-sharing system installed on campus through the app, and from September 2024, the app has also enabled registration for the on-campus parcel locker delivery service.

●Multilingual Communication Platform

As a sub-platform of the TGO App based on LINE, a multilingual communication platform has been established. It is intended to contribute to the realization of a coexisting society by improving convenience in obtaining information for students and citizens, including the expected increase in international students and foreign residents. A foundation necessary for communication has been built, including a "chatbot function" capable of displaying text in multiple languages and a "push function for surveys and information provision". It has been offered as the Multilingual Communication LINE Official Account since September 2023. In addition, the platform has developed various functions, including the "symptom expression function" to explain areas of physical discomfort in multiple languages, the "AI consultation desk function" to provide multilingual answers for procedures and daily life information needed by international students, and the "restricted food registration function", which supports dietary diversity according to various cultures, religions, and health conditions.

Carbon Neutral × Smart Campus 5.0 Declaration

In January 2021, Hiroshima University announced the "Carbon Neutral × Smart Campus 5.0 Declaration" with the target year of 2030. In August 2022, the University formulated the "Action Plan for Achieving Carbon Neutrality at Hiroshima University – Road to 2030 (2022–2027)" (partially revised in April 2023) as a roadmap for achieving carbon neutrality. This plan outlines the University's initiatives in research, education, and international engagement and aims to collaborate with municipalities and companies to pioneer a decarbonized society. To achieve carbon neutrality by 2030, the University has installed 6.6 MW of solar power generation equipment across 68 buildings and 7 parking lots at the Higashi-Hiroshima Campus—the largest scale among national universities. This initiative secures renewable energy equivalent to 20% of the current electricity consumption at the Higashi-Hiroshima Campus.

During FY2024, approximately 2.1 GWh of electricity was generated, which is equivalent to 21 days of electricity consumption at the Higashi-Hiroshima Campus and enough to supply annual electricity for 476 households in the Chugoku region (*1). This initiative has been implemented as a PPA project (*2), with electricity supply gradually starting from November 2024. Simultaneously with the start of the PPA project, an electric vehicle (EV) sharing service was introduced, aiming to contribute to the formation of a next-generation "smart city."

(*1) Source: Ministry of the Environment, FY2023 Household Sector CO2 Emissions Survey – Data Edition (Final Values).
(*2) PPA: Power Purchase Agreement. An electricity supply contract concluded between Hiroshima University and the power generation company.


Installation of solar energy power generation facilities (Higashi-Hiroshima Campus)

Action Plan (2023.4)

Carbon Neutral × Smart Campus 5.0 Declaration

Cases of SDGs Implementation

Hiroshima University is engaged in various activities that contribute to the achievement of the SDGs. We have published these efforts on the NERPS website. If you scan the QR code, you can see our activities by goal and by activity category. In addition, from page 24 onward, we present unique or distinctive activities of Hiroshima University.

ここから世界の平和をつくる
広島大学
×
SDGs
NERPS
NERPSは持続可能な開発目標
「SDGs」を支援しています。

Human development / social issues

No Poverty

End poverty in all its forms everywhere.

Zero Hunger

End hunger, achieve foodsecurity and improved nutrition and promote sustainable agriculture.

Economic system

Affordable and Clean Energy

Ensure access to affordable, reliable, sustainable and modern energy for all.

Decent Work and Economic Growth

Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.

Global environment

Climate Action

Take urgent action to combat climate change and its impacts.

Life Below Water

Conserve and sustainably use the oceans, seas and marine resources for sustainable development.

Good Health and Well-being

Ensure healthy lives and promote well-being for all at all ages.

Quality Education

Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.

Gender Equality

Achievegender equality and empower all women and girls.

Clean Water and Sanitation

Ensure availability and sustainable management of water and sanitation for all.

Industry, Innovation and Infrastructure

Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.

Reduced Inequalities

Reduce inequality within and among countries.

Sustainable Cities and Communities

Make cities and human settlements inclusive, safe, resilient and sustainable.

Responsible Consumption and Production

Ensure sustainable consumption and production patterns.

Means of implementation

Life on Land

Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.

Peace, Justice and Strong Institutions

Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.

Partnerships for the Goals

Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development

SDGs in general

All SDGs

Matters regarding SDGs in general

No Poverty

End poverty in all its forms everywhere.

Initiatives for the Prevention of Child Abuse and Health Support through Dental Health Activities at Temporary Child Protection Facilities

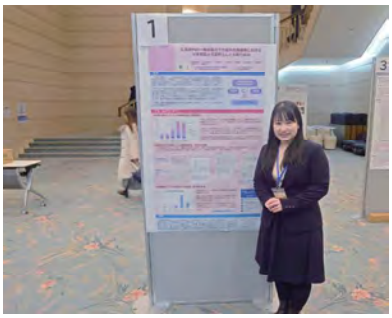
Graduate School of Biomedical and Health Sciences, Department of Pediatric Dentistry

Assistant Professors Yuria Asao / Assistant Professors Yuko Iwamoto

Child abuse has become a serious social issue in recent years, making prevention, early detection, and prompt intervention an urgent priority. In Hiroshima Prefecture, a Child Abuse Prevention Council was established in fiscal year 2009, based on the Hiroshima Prefecture Dental Hygiene Liaison Council (composed of government agencies, universities, and the prefectural dental association). Since then, dental professionals have visited three temporary child protection facilities within the prefecture once a month to conduct oral examinations and provide dental health guidance for children in care. From fiscal year 2022 onward, under commission from Hiroshima Prefecture and Hiroshima City, the Hiroshima Prefecture Dental Association has continued these activities as the leading organization. The Pediatric Dentistry Department of Hiroshima University has also remained actively involved. From fiscal years 2024 to 2025, the department has provided training sessions for newly dispatched dental association members and continues to send pediatric dentists on a regular basis.

During oral examinations, in addition to standard check-up items, dentists carefully assess for signs suggestive of physical abuse, such as discolored teeth, fractured teeth, and maxillofacial injuries. When urgent treatment is required, they support children in receiving dental care during their stay at the facility. They also prepare medical certificates for civil court proceedings when necessary and create referral documents to nearby medical institutions to ensure smooth access to dental care after children leave the facility. As part of dental health guidance, individualized and group oral hygiene instruction is provided to children, including participatory educational talks. Facility staff are also advised on topics such as supervised tooth brushing and identifying harmful oral habits that require attention.

In addition, surveys on basic lifestyle habits and questionnaires are conducted. Together with the results of oral examinations, these data are compiled, analyzed, and evaluated by the Pediatric Dentistry Department of Hiroshima University, and findings continue to be reported at academic conferences and professional meetings. At the university hospital, pediatric dentists also serve as members of a child-rearing support team and have delivered lectures to raise awareness among medical staff.



Temporal dynamics of payment choices: Unraveling the interplay between time preferences and credit card utilization in Japan

Graduate School of Humanities and Social Sciences: Economics Program

Distinguished Professor KADOYA YOSHIHIKO

This study investigates whether the present bias influences the payment behavior of credit card holders in Japan. We hypothesize that credit card holders with present bias prefer to delay bill payment, even at the cost of accepting interest charges. To test this hypothesis, we utilize a dataset comprising 128,032 observations from a leading securities company. Our analysis reveals that a significant number of respondents indeed delayed credit card bill payments, suggesting a potential association with present bias behavior. Specifically, impatience and impulsivity exhibit a positive association with credit card payments, indicating that impatient and impulsive credit card users are more likely to postpone payment, even when interest charges are incurred. The implications of this study extend to both credit card users and issuers, highlighting the influential role of impulsivity in the timely payment of bills. For users, understanding the role of impulsivity in payment behavior can lead to more informed financial decisions and strategies to avoid unnecessary interest charges. For issuers, recognizing the patterns of present bias can inform the development of products and policies aimed at encouraging timely payments, ultimately benefiting both parties. This study contributes to the literature by providing empirical evidence on the time-inconsistent behavior of Japanese credit card holders and underscores the need for tailored financial education and interventions to mitigate the effects of present bias in financial decision-making.

Table 2. Descriptive statistics.

Variable	Mean	Std. Dev	Min	Max
Dependent variable				
credit_no_interest	0.9769	0.1500	0	1
credit_interest	0.0444	0.2060	0	1
Independent variable				
Impatience	0.0143	0.9459	−0.6789	3.5745
Hyperbolic discounting (Impulsivity)	0.1248	0.3305	0	1
Men	0.6169	0.4861	0	1
Age	43.7929	11.7473	18	94
Age squared	2055.8260	1088.1690	324	8836
Education	15.2013	2.0406	9	21
Married	0.6602	0.4736	0	1
Number of children	1.0778	1.1012	0	12
Full-time employment	0.7709	0.4202	0	1
Household income	7519779	4125947	1000000	2.00E + 07
Log of household income	15.6722	0.6005	13.8155	16.8112
Household assets	1.89E + 07	2.34E + 07	2500000	1.00E + 08
Log of household assets	16.15227	1.0768	14.7318	18.42068
Risk aversion	0.5344	0.2284	0	1
Financial literacy	0.7492	0.2934	0	1
Observation		128,032		

Zero Hunger

End hunger, achieve food security and improved nutrition and promote sustainable agriculture.

Providing Learning of Food and Agriculture from the Perspective of SDGs: Hiroshima University Affiliated Farm of the Faculty of Bioresource Sciences

Department of Applied Biological Science

Affiliated Farm Director and Professor Toshihisa Sugino

The Affiliated Farm of the Department of Applied Biological Science breeds dairy cows, beef cattle, Burmese sheep, and goats for the purpose of education and research. Leveraging the farm and affiliated facilities, three training programs are conducted through collaboration between faculty members and farm technical staff.

❶ Food and Agriculture Field Science Exercise to Cultivate the Dignity of Life This training program targets students from our university

This training program targets students from our university and other non-agricultural faculties. Through lectures, practical training, and discussions, students learn about the production of food sources within the cycles of grass, livestock, and soil. The aim is to provide an opportunity to contemplate the existence of humans, sustained by the lives of other creatures, from the perspectives of food, agriculture, the environment, animal welfare, SDGs, and more.

❷ Dairy Farm Field Science Exercise

Targeting students from our university and agricultural faculties of national universities in the Chugoku-Shikoku region, this program utilizes the farm's facilities to teach the processof milk production and food processing within the cycles of grass, livestock (especially dairy cows), and soil. Students are provided with an opportunity to consider challenges and new technologies (such as smart dairy farming) contributing to the development of dairy farming for a better society, from the perspectives of food, agriculture, environment, animal welfare, and SDGs.

❸ Food Education Field and Science Exercise for Childcare Major Students

Primarily targeting childcare major students in the Chugoku-Shikoku region, this program allows students to learn about the production and processing of food sources within the cycles of grass, livestock, and soil through lectures and practical training. The goal is to apply this knowledge to the practice of food education for children in kindergartens and daycare centers.

Sustainable Food Production and Environmental Issue Resolution through Interdisciplinary Research on Plants

Graduate School of Integrated Sciences for Life

Professor Jun Wasakii The Research Core for Plant Science Innovation, Hiroshima University

The Research Core for Plant Science Innovation at Hiroshima University

Addressing challenges such as global warming, resource depletion, low environmental impact, and insufficient arable land is essential to achieve sustainable food production supporting the growing global population. Improving the self-sufficiency rate of food in our country is also crucial. To address these issues, we conceptualized the "The Research Core for Plant Science Innovation at Hiroshima University."

The research center aims to conduct interdisciplinary research leveraging the strengths of plant-related research at Hiroshima University. The goal is to achieve sustainable food production and solve environmental problems, bringing about the "Next Generation Green Revolution." This involves not only traditional agricultural perspectives but also the integration of knowledge from various fields, including plant physiology, ecology, microbiology, symbiosis, soil science, and organic chemistry. Researchers at Hiroshima University, who were previously working individually or in small groups, aim to activate interdisciplinary collaborative research by connecting organically around this research center.

The center focuses on practical challenges such as malnutrition tolerance, stress tolerance and functional enhancement. These areas are expected to advance through mutual understanding and support from foundational research. As a means to an end, the center has established the "Nutrition Team" to address malnutrition tolerance, the "Stress Team" to solve cultivation issues in unsuitable areas, the "Functional Development Team" aiming for increased yield and enhanced functionality and the "Foundational Research Team" to support these studies on a research basis. This structure promotes individual research while facilitating collaborative efforts.

Cultivation Experiment in the Long-term Experimental Field (Nutrition Team)

▲Phosphorus Deficient Plot ▲Nutrient Sufficient Plot

▲Corn Single Planting Plot ▲Corn-Lupine Mixed Planting Plot

Examination at Corn Field: The effect of root secretions that promote phosphorus absorption improves growth in corn, which is mix-planted with lupine. (Nutrition Team)

Good Health and Well-being

Ensure healthy lives and promote well-being for all at all ages.

Development of Specialized Technical Simulator using Virtual Reality

Hiroshima University Hospital, Department of Radiology

Professor Kazuo Awa / Associate Professor Yukiko Honda / Assistant Professor Hidenori Mitani

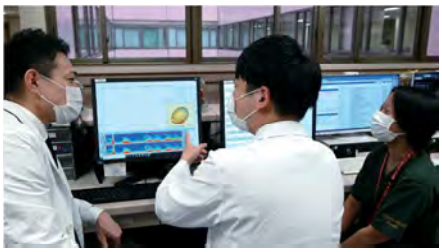
Virtual Reality (VR) has been increasingly used in various fields, including medicine, serving as an educational and preoperative simulation tool. Specializing in endovascular treatments, we collaborated with a company to develop an educational VR simulator. Equipped with VR goggles and controllers, users can manipulate catheters and administer drugs in a virtual world of an angiography room. Currently, interventions such as dynamic chemotherapy for liver cancer and embolization of pelvic bleeding trauma are possible. This simulator is already being used in student training, promoting active learning through hands-on experience. The development aligns with the Ministry of Education, Culture, Sports, Science and Technology's initiative for the "Advanced Plan for University and College Education Utilizing Digital Technology." The interactive simulation is expected to be effective as preparatory education before actual procedures, with the aim of shaping a new form of medical education.

Development of a Multidimensional Model for Predicting the Risk of Emergency Hospitalization in Patients with Epilepsy: Integrating Clinical, Social, and Psychological Factors

Hiroshima University Hospital, Department of Clinical Neuroscience and Therapeutics

Assistant Professor Shuichiro Neshige

This study developed and validated a multidimensional model to predict emergency hospitalizations caused by recurrent seizures in patients with epilepsy. By incorporating not only clinical factors but also social and psychological factors such as living alone and mood disorders the model enables more accurate risk assessment. Utilizing this model allows healthcare providers to identify high-risk patients at an early stage and connect them to appropriate interventions and individualized support. As a result, the approach is expected to reduce the burden on emergency medical services and improve patients' quality of life. As a concrete initiative aimed at ensuring that no one is left behind in healthcare, it is anticipated to contribute to SDG Goal 3: "Good Health and Well-Being for All."



Project on Creating VR (Virtual Reality) Games for Children as a Digital Medicine for Pediatric Cancer

Hiroshima University Hospital, Department of Pediatric Surgery

Lecturer Isamu Saeki

Hiroshima University Hospital, serving as the sole pediatric cancer center in the Chugoku-Shikoku region, has been providing treatment for numerous pediatric cancer patients. The treatment of pediatric cancer is challenging, requiring prolonged hospitalization for children who may not fully comprehend their condition, undergoing intense and prolonged treatments with side effects.
In recent years, it has been reported that VR (Virtual Reality) can be used to treat diseases, and VR is attracting attention as a digital medicine. In fact, VR is already used overseas to treat panic disorder.
The Pediatric Department (Pediatric Surgery and Pediatrics) at Hiroshima University Hospital has initiated a project to create VR games as the world's first digital medicine development project for pediatric cancer. Collaborating with Kodansha in respect of characters used in the VR games, we will strive to create VR games that contribute to deepening children's understanding of pediatric cancer and making treatment more advanced.

Cooperation in the “Diabetes Summer Camp” (FY2025)

Graduate School of Biomedical and Health Sciences, Department of Pediatric Dentistry

Assistant Professor Yuko Iwamoto / Specially Appointed Assistant Professor Mariko Kametani

The Japan Diabetes Association organizes a “Pediatric Diabetes Summer Camp” for elementary, junior high, and high school students with type 1 diabetes. Through group living in a natural environment, the camp provides children with opportunities to acquire the knowledge and skills necessary for diabetes self-management, such as self-administering insulin injections and monitoring blood glucose levels. It also serves as a setting for mental support, where participants can encourage one another and build supportive friendships.
The Department of Pediatric Dentistry at Hiroshima University cooperates in this camp, which is held during the summer vacation by the Hiroshima Momiji Association. The FY2025 “Diabetes Summer Camp” was held at the Juchheim Ninoshima Welcome & Exchange Center. During the dental checkups, oral examinations were conducted, including assessments of dental plaque, gums, and periodontal pockets. A caries risk test was also performed. Finally, remaining plaque was disclosed using a red staining agent, followed by toothbrushing instruction. This provided participants with a practical learning opportunity about oral care as part of the camp’s goal of “living well with diabetes.”

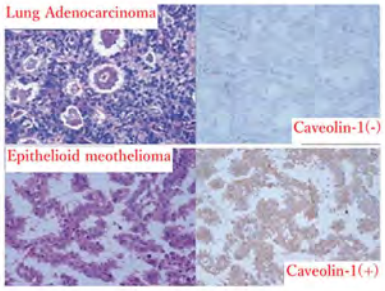
▲ left:Examination of dental plaque, gums, and periodontal pockets
right:Intraoral photography and brushing guidance

Development of methods leading to rapid, accurate, and more precise pathological diagnosis

Department of Pathology Biomedical and Health Sciences

Professor Yukio Takeshima

By integrating morphology and molecular biology, we aim to develop methods that lead to rapid, accurate, and more detailed pathological diagnosis. In particular, we are focusing on the detection of markers that are useful for accurate pathological diagnosis of mesothelioma. Mesothelioma, closely related to asbestos exposure, is malignant tumor that develop from mesothelial cells lining the chest wall and the surface of the lungs (pleura), the inside of the abdominal cavity (peritoneum).



Provision of a comprehensive healthcare program for individuals with hemophilia

Graduate School of Biomedical and Health Sciences, Department of Pediatrics

Assistant Professor Yoko Mizoguchi

Hiroshima University Hospital is designated as the sole hemophilia treatment center in the Chugoku-Shikoku region. The department provides an annual comprehensive outpatient program for pediatric patients every summer to detect and prevent hemophilic arthropathy at an early stage. Approximately thirty patients with hemophilia from the Chugoku and Shikoku regions participate in this program annually.
Hemophilia is an inherited disorder, and although most patients are male, some female relatives may be carriers (i.e., individuals who carry a genetic mutation but do not exhibit symptoms). Carriers may also experience bleeding symptoms, such as heavy menstruation and postpartum hemorrhage, although this is not widely recognized. If a female carrier is pregnant with a male child, there is a 50% chance that the child may inherit hemophilia. In such cases, precautions should be taken during delivery to prevent intracranial bleeding, including avoiding procedures such as suction delivery, and ensuring the availability of coagulation factor products in case the infant is diagnosed with hemophilia.
In addition to educating hemophilia patients' families and obstetricians about the bleeding symptoms in carriers, as well as the risks and management during childbirth, we are committed to improving the quality of life and health for both patients with hemophilia and their families through early education for carriers, starting in childhood.

Good Health and Well-being

Ensure healthy lives and promote well-being for all at all ages.

Dental Healthcare Support Activities in Cambodia (FY2024)

Graduate School of Biomedical and Health Sciences, Department of Pediatric Dentistry

Assistant Professor Yuko Iwamoto

In Cambodia, the civil war led to the massacre of teachers, physicians, and dentists, and the collapse of education and healthcare systems in the late 1970s. As a result, the country still faces insufficient provision of dental care and oral health services, as well as a shortage in the training of dentists. Since fiscal year 2009, the School of Dentistry at Hiroshima University, in cooperation with the NPO NGO Hiroshima, has continued to carry out dental healthcare support activities in Cambodia. This initiative aims to protect the oral health of Cambodian children and help realize peaceful and healthy lives. Each year, dentists and dental hygienists, together with dental students and members of the general public, travel to Cambodia to provide support. To date, dental checkups and treatments have been provided to approximately 15,500 children, many of whom had never previously undergone a dental examination.

In addition, the program provides training on dental health education methods to elementary school teachers and to students at teacher training colleges who will become future educators. Using original paper-theater storytelling materials and puppets, the initiative promotes sustainable oral health practices, aiming to reduce dental caries through long-term educational impact and to create a ripple effect benefiting both current and future generations of children. The program also accepts exchange students from Cambodia studying in Hiroshima, as well as local Cambodian dentists and dental students, to participate in the activities. Through working together, students deepen cultural exchange and cultivate a global perspective. At the same time, the initiative contributes to human resource development, with the long-term goal of gradually transferring leadership of these activities to Cambodian professionals to support self-reliance in dental healthcare.

In fiscal year 2024, field activities were conducted from February to March 2025. In addition to Siem Reap Province, which has been visited annually, activities were expanded to Battambang Province, which borders Thailand, and Mondulkiri Province, near the border with Vietnam. The team also had the opportunity to visit the Vice Governor of Siem Reap Province to report on their activities and engage in discussions. The program not only welcomed Cambodian dentists and dental students but also included international students from neighboring Vietnam as participants in the activities.

▲Conducting teacher training sessions and dental health guidance at elementary schools

▲Visit by the Vice Governor of Siem Reap Province

▲Dental check-ups at elementary schools in the mountainous areas of Mondulkiri Province

The 43rd Parent and Child Oral Health Class (FY2025)

Graduate School of Biomedical and Health Sciences

Associate Professor Mohammad Moshiur Rahman

In connection with "Dental and Oral Health Week" held every June, the Department of Pediatric Dentistry organizes this annual public awareness event for the local community. During the event, children and their parents who visit the clinic are invited to learn while having fun through various interactive activities. These include a caries risk test in which saliva is collected with a cotton swab to measure the level of bacteria in the mouth, a display corner showing the amount of sugar contained in soft drinks and carbonated beverages, and educational activities such as picture-story shows and stuffed-animal play to teach the importance of teeth. Dental residents, as well as students from the School of Dentistry and the Oral Health Sciences Program (Oral Health Science major), also participate as part of their educational training.The program has been held continuously since 1980. After a suspension due to the spread of COVID-19, the event held in June 2025 marked its 43rd session.

Quality Education

Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.

Aiming to Develop Human Resources Who Can Design Educational Visions for Next-Generation

Educational Vision Research Institute (EVRI)

Assisting the Development of Curricula and the Establishment of New Teacher Training Colleges (TECs) in Cambodia

Educational Vision Research Institute (EVRI) collaborated with the Hiroshima Peace Contribution Network Council in implementing a JICA Partnership Program (JPP) "Support for social studies curriculum and textbook development for building a sustainable society in Cambodia" commissioned by the Japan International Cooperation Agency (JICA). Over the course of three years, we worked on improving the social studies curriculum and the expertise of textbook developers, and on developing and practicing a "model unit" with an eye on support for democratization and citizenship education.
As a continuation and development of the above-mentioned program, another project was adopted by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) under the scheme of "Dissemination of Japanese-style Education using the Public-Private Collaborative Platform (EDU-Port Nippon)." In this project, we helped to build "Developing and Applying Textbooks System" in Cambodia from the perspective of Japanese-style education that is open to teachers' independent research on teaching materials and children's exploratory learning. Through this initiative, we have promoted the professional development of editors who envisage and edit textbooks from an expert perspective and teachers who make good use of them autonomously.

Since fiscal year 2017, EVRI has cooperated with PADECO Co., Ltd. in "Project to Establish Foundations for a Teacher Education College" commissioned by JICA. Through this project, we have provided (1) Technical assistance for establishing a university management system, which included training for the senior staff of two Teacher Education Colleges (TECs) to be established in Cambodia, (2) Technical assistance for carrying out action research with the aim of improving research capability of teacher educators and making improvements in teacher training classes. Even after the completion of the project, EVRI has joint research activities with the Teacher Education Colleges such as online joint seminars.

Research and Development of Inclusive Education and Peace Education

Professor Norimune Kawai, a member of EVRI, carried out "Development Research on Inclusive Education System at the Secondary Education level", which was supported by "FY 2020 Practical Research Grant for Healthy Development of Children and Teenagers" provided by Nippon Life Insurance Company Foundation. With an awareness of diversity in a classroom, this project focused on students who have foreign roots or disabilities and students who have difficulty in learning and in their living, we develop lesson plans and methods for school subjects, which will lead up to their satisfaction and self-confidence in learning. As research and development of peace education, EVRI carries out the following three sets of activities:

1. In collaboration with the Hiroshima Prefectural Board of Education and Hiroshima Global Academy – an integrated public junior and senior high IB school, EVRI has helped teachers to develop their curriculum design skills through elaborating units about "peace" and "Hiroshima."
2. EVRI has videotaped interviews with peace educators who have promoted peace education in Hiroshima and archived them to contribute to passing on their efforts. Ten interview videos and six commentary videos are available on the website of EVRI.
3. EVRI organizes an annual international seminar: PELSTE (Peace Education and Lesson Study for Teacher Educator) about the principles and methods of peace education and lesson studies. Participants from member universities of the International Network of Educational Institutes (INEI) are invited to exchange their experiences and expectations on how to promote peace education and lesson studies in their respective local contexts.

Support for Problem-Solving Learning to Address Regional Issues, by Making Use of ICT

Since the fiscal year 2021, EVRI, in collaboration with Higashihiroshima City Board of Education, has carried out the wide-area exchange-type online regional learning, connecting multiple elementary schools in the city, once a month. The project provides schools and classes that vary in their sizes and their surrounding environment with opportunities to think about how to address regional issues, at which participating students interact with each other and with those who are faced with the issues in the field. It also provides teachers with opportunities for their professional development for effective use of ICT.

Quality Education

Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.

Nurturing Children's Smiles Through Education Tailored to Their Individuality

Graduate School of Humanities and Social Sciences

Professor Yoshinori Eto

To test the educational thories obtained from research into Educational Thought of Rudorf Steiner and M.Montessori, I established the NPO Steiner & Montessori Academy (child development support and after-school day service) in response to the requests of parents of children with developmental disorders and other hardship and challenges. There are two main pillars of the treatment provided in this facility. One is the method developed on the basis of respect for individuality; the other is the activities, such as artistic learning, pottery, natural farming, beekeeping, etc. by focusing on the use of hands and the whole body. In fact, through these activities, children who have not attended schools because they have not been understood due to their disorders, regain their zest for life and cheerfulness, and can successfully return to school. Our activities have been highly evaluated by the Boards of Education, schools, and families (we are the only facility in the city in which the attendance of this facility is recognized as the attendance at school).

For more information on the changes in children before and after participating in these activities, please take a look at the "Voices from parents" on our homepage. This support program was adopted by Hiroshima University's crowdfunding project, and even today, Hiroshima University alumni and current students are also participating in supporting children's education.

Providing high-quality education internationally as a Marine Biology Education Hub

Seto Inland Sea Carbon-neutral Research Center

Blue Innovation Division, **Marine Biological Laboratory**

The Marine Biological Laboratory has been recognized as an educational collaborative utilization hub by the Ministry of Education, Culture, Sports, Science and Technology since September 2018. It is now in its second phase of the hub-development project from April 2023. Engaging in a wide range of educational and research activities, such as promoting the use of facilities by other universities and organizing international summer schools, we aim to provide inclusive, equitable, and high-quality education as the "Hiroshima University, a well-regarded institution known for its education" to all people, fostering opportunities for lifelong learning.
Specifically, we offer marine practical training for elementary, middle, and high school students, implement the Global Science Campus program for nurturing the next generation of talent in which Hiroshima University is involved, provide credit transferable subjects to students from national, public, and private universities across the country, and conduct advanced scientific education for university and graduate students worldwide using the JST (Japan Science and Technology Agency) Sakura Science Program.
In the 2023 academic year, we held an online lecture titled "Overcoming the Challenges of Science Education in the Post-Covid 19 Era" to students and faculty of PGRI University Delta Sidorajo, a private university in Indonesia. In addition, we visited Universitas Islam Negeri (UIN) Maulana Malik Ibrahim Malang and UIN Sunan Ampel Surabaya, which have international exchange agreements with Hiroshima University, and gave lectures on the current state of STEAM (Science, Technology, Engineering, Art and Mathematics) education in Japan, in addition to research and education at the Marine Biological Laboratory.
As part of promoting lifelong education opportunities, we have conducted interview classes at the Hiroshima Learning Center of the Open University of Japan. We are also involved in the development of school leaders, including students who want to become teachers and teachers in the field of education. From elementary to secondary education, higher education, and lifelong education, we are internationally providing high-quality education.
In fiscal year 2024, we served as a supporting sponsor of the 2nd World Conference of Marine Stations (WCMS2024), which was held in person for the first time in November.
Following the conference, we welcomed faculty and staff from the St. John's Island National Marine Laboratory of the National University of Singapore and from Lomonosov Moscow State University. During their visit, we exchanged views on the current status of marine and fisheries research facilities in each country, including our coastal and fisheries research stations, and further strengthened academic and research collaboration

An experimental scene of NGS
(Next Generation Sequencer)

The 10th Cambodia Alumni Follow-up Seminar Held

Graduate School of Humanities and Social Sciences, International Education Development Program

Associate Professor Takayoshi Maki

The Cambodia Alumni Follow-up Seminar Celebrates Its 10th Anniversary

On December 27-28, 2024, the annual Alumni Follow-up Seminar was held at Phnom Penh Teacher Education College (P-TEC) in Phnom Penh, the capital of Cambodia. To commemorate its 10th anniversary, this year's seminar was extended to a two-day event
On the first day, December 27, a total of 14 presentations were delivered. In addition to alumni and current students of Hiroshima University, graduates of Phnom Penh -Teacher Education College and Battambang Teacher Education College who are now actively working as school teachers also presented research deeply rooted in their educational practice. On the second day, December 28, a panel session was held under the theme: "Let's Think about Education in Cambodia Together: A Sharing Session You Can Hear Diverse Stories from Diverse Educators."
The panel featured five speakers: alumni now working at the Ministry of Education, Youth and Sport in Cambodia; the president of PTEC; and our professors Taiji Hotta, Takuya Baba, and Kinya Shimizu.The seminar brought together a strong vertical network of Hiroshima University

alumni, their supervisees, and graduates. With both in-person and online participation, the event attracted well over 100 attendees. It provided an opportunity to reaffirm the important role that Hiroshima University alumni play in educational development in Cambodia.

Website: https://www.hiroshima-u.ac.jp/en/news/89027

Hyperbolic Discounting Among Elderly Investors and Its Impact on Retirement Asset Formation

Graduate School of Humanities and Social Sciences, Economics Program

Professor Yoshihiko Kakutani

This study analyzed the impact of hyperbolic discounting on retirement asset formation among Japanese investors aged 65 and older.The findings indicate that a short-term orientation significantly hinders the achievement of long-term asset goals, particularly targets exceeding 100 million yen and can contribute to financial insecurity in later life. These results provide important insights related to the SDGs, highlighting the need to build a stable foundation for secure retirement under “Good Health and Well-Being” and to enhance financial literacy education under “Quality Education.”The analysis underlying this research is based on a student paper that received the Excellence Award at the 2024 Student Asset Formation Paper Award.

Quality Education

Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.

Cooperation with events that provide bioresources as educational materials

Amphibian Research Center

Associate Professor Atsushi Suzuki

On May 12, 2025, at the 28th Bazaar of Bioresources as Educational Materials held at Hiroshima Prefectural Education Center, we cooperated with the event by providing teaching staff of elementary, junior high, compul- sory education schools and prefectural schools in Hiroshima Prefecture with samples of bioresources as educational materials with information on the utilization, breeding, and cultivation methods of those bioresources. In particular, we provided fixed embryo samples of the African clawed frog, Xenopus laevis, which is important for biomedical research. A brief report on the 28th Bazaar of Bioresources as Educational Materials is posted on the website of the Hiroshima Prefectural Education Center.

Gender Equality

Achievegender equality and empower all women and girls.

Practice of Multicultural Understanding and Peaceful Coexistence Education through Japan–Korea Comparisons in 'Korean Communication Skill-Up V

Foreign Language Education Research Center

Assistant Professor Heeeun Kang

Image caption: "Korean Communication Skill-Up V" class Understanding peace and multicultural coexistence through Japan–Korea social and cultural comparisons

This course is designed to foster practical Korean-language communication skills while focusing on themes related to society, culture, and social issues in both Japan and South Korea. Grounded in the increasingly important perspective of multilingualism and multicultural coexistence in today's globalized world, the course aims to cultivate not only language proficiency but also deeper cross-cultural understanding.

Students move beyond simply improving their language skills. They reflect on themes aligned with the SDGs such as intercultural understanding, social justice, and coexistence with others and develop the ability to express and discuss these ideas in Korean as a second language. Specific topics covered include concepts of happiness and justice; attitudes toward other cultures; creating "Hiroshima mapping" projects; youth culture; military service; job hunting; declining birthrates and aging populations; overconcentration in major cities; and inequality. Through these themes, students strengthen their logical thinking and expressive abilities in Korean while heightening their awareness of social issues.

The course also incorporates exchange activities with international students and diverse group work, providing opportunities for collaborative intercultural learning and fostering an attitude of peaceful dialogue. In this way, the course integrates advanced foreign language education with peace education, nurturing multicultural understanding and peaceful values through Korean language instruction while embodying the principles of the SDGs.

◀ Korean Communication Skills Enhancement V" Class: Understanding Peace and Multicultural Coexistence through Comparative Study of Japanese and Korean Society and Culture

Career Support Activities for Women at Hiroshima University

Vice President (Student Support/Diversity, Equity and Inclusion) Kiriko Sakata

Hiroshima University is promoting various activities to create a better working environment throughout the workplace, with the goal of enabling women to fully demonstrate their individuality and ability.

Utilization of Research Support Staff System

With the aim of promoting a balance between research and life events, a system was launched in FY2017 to assign research support staff to work as research assistant under the direction of researchers affiliated with Hiroshima University when pregnancy, childcare, or nursing care make it difficult for them to secure research time. In FY2017, 13 participants (12 women and 1 man) took advantage of the program in the second semester only. In FY2018 and FY2019, the program was implemented in the first and second semesters. A total of 118 researchers (109 women and 9 men) used the program from FY2018 to FY2024.

Introduction ofthecareerAdvancement Proiect(CAP) Researcher System

To support women with doctoral degrees who have their careers interrupted to resume their careers, and to support spouses of researchers affiliated with Hiroshima University to continue or resume their research and live together, the Career Advancement Project (CAP) Researcher System was introduced in FY2018. One full-time and two part-time CAP researchers were hired in FY2019、followed by one full-time researcher in FY2020, one full-time and two part-time researchers in FY2021, one full-time and one part-time researchers in FY2022, and one full-time and one part-time researchers in FY2023, and one full-time and two parttime researchers in FY2024.

Conduct Hands-on Science Course for Female High School Students to Increase the Number of Female Students Entering Science and Engineering Departments

Gender Equality Promotion Office

Deputy Executive Director (Gender Equality Promotion) Mari Katayanagi

In order to increase the number of female students entering science and engineering departments, the Gender Equality Promotion Office holds an annual hands-on science course where female high school students can experience experiments and practical training. Female science and engineering researchers at Hiroshima University serve as key instructors, and emphasis is placed on providing opportunities for interaction between female high school students and female researchers and university students. In FY2017, 48 female high school students participated in the event at the School of Engineering, and in FY2018, 39 similar students participated in the event at the School of Integrated Arts and Sciences. In FY2019, the event was postponed due to the spread of COVID-19 pandemic. In FY2020, the program resumed and was held at the School of Informatics and Data Science with 30 participants. There were 22 participants at the School of Education in FY2021, 43 participants at the School of Science in FY2022, 51 participants at the School of Applied Biological Science in FY2023, and 53 participants at the School of Engineering in FY2024. About 10% of the participants have enrolled in Hiroshima University.

How do smartphones connect?
Participants receive an explanation of an experiment in an anechoic chamber in the hands-on science course at the School of Engineering, Hiroshima University in FY2024

Gender Equality

Achievegender equality and empower all women and girls.

Implementing STEM (Science, Technology, Engineering and Mathematics)・STEAM (Science, Technology, Engineering, Art and Mathematics) Education Programs for Fostering Women in Science and Engineering

Graduate School of Humanities and Social Sciences

Professor Kazuo Kawada / Associate Professor Hiroyuki Suzuki

Hiroshima University is collaborating with the Girl Scouts of Japan to create educational materials for fostering women in STEM (Science, Technology, Engineering, and Mathematics). Additionally, a joint research agreement has been established to develop and validate the effectiveness of the curriculum. As part of the Girl Scouts of Japan's mission to 'maximize the potential of all girls and women,' the university is actively contributing to the implementation of STEM programs.
In December 2023 and in April and July 2024, the following programs were conducted, organized by the Girl Scouts of Japan, sponsored by the Micron Foundation, and in collaboration with Hiroshima University and Tokyo Institute of Technology. (❶)

❶ STEM Education Program 'Chip Camp' (December 26 to December 28, 2023)
❷ STEM Education Program 'Chip Camp' (April 2 to April 4, 2023)
❸ STEAM Education Program 'Girls Going Tech' (July 28, 2024)

STEM Education Program 'Chip Camp' (December 26 to 28, 2023, April 2 to 4, 2024)

Organized by the Girl Scouts of Japan, sponsored by the Micron Foundation, and in collaboration with Hiroshima University and Tokyo Institute of Technology, a three-day STEM education program called 'Chip Camp' for junior high school girls was held at the National Olympics Memorial Youth Center in 2023, and at the National Etajima Youth Exchange Center and Micron Memory Japan (Hiroshima) Factory/Hiroshima Development Center in 2024. The program targeted junior high school girls whose career paths were not yet clear.
Forty-seven (2023) and 46 (2024) junior high school students from around Japan participated and learned about STEM-related and STEAM-related programs. They had the opportunity to hear from female leaders and engineers. At these events, Associate Professor Hiroyuki Suzuki led a session titled 'Ideathon Time: Thinking Flexibly about the Way to Reach the Goal,' and Professor Kazuo Kawada led sessions titled '0 and 1 – The World of Computers' and 'Let's Drive a Car, Which Doesn't Collide, with the Raspberry Pi,' respectively. (Students from the School of Education and the School of Dentistry, as well as graduate students from the Graduate School of Humanities and Social Sciences, served as facilitators in these sessions.)



STEAM Education Program 'Girls Going Tech' (July 28, 2024)

Organized by the Girl Scouts of Japan, sponsored by the Micron Foundation, and in collaboration with Hiroshima University, a STEAM education program called 'Girls Going Tech: Let's Explore the World of Computers!' was held at Hiroshima University's Higashi-Senda Campus. The program targeted female elementary school 4th–6th graders.
Twenty-three elementary school students from around Japan participated and had an opportunity to learn about a STEAM-related program. At this event, Professor Kazuo Kawada led sessions titled 'Let's Pretend to Be a Computer! – About Binary Numbers and Their Calculations – ' and 'Making Robots Using Vibration,' respectively. (Students from the School of Education served as facilitators.)


Clean Water and Sanitation

Ensure availability and sustainable management of water and sanitation for all.

Groundwater Recharge under Land Use and Climate Change: Toward Water Security in Suburban Watersheds

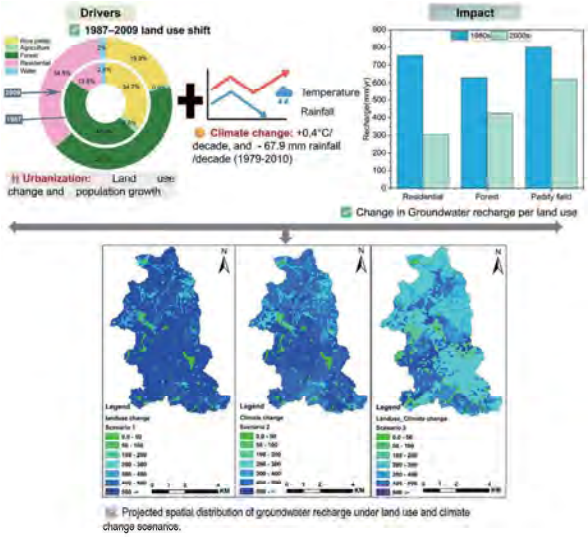
Hiroshima University, Graduate School of Advanced Science and EngineeringSpecially

Appointed Assistant Professor Sharon Bih Kimbi

This study investigates how urbanization and climate change affect groundwater recharge in Japanese watersheds. Hydrological modeling analysis conducted in the suburban Kurose River watershed in Higashi-Hiroshima City revealed that rapid urban expansion and decreased precipitation from the 1980s to the 2000s led to a 34.9% decline in groundwater recharge, a 41.4% reduction in baseflow, and an increase of more than 130% in surface runoff.

Spatial analysis further showed that the reduction in recharge was particularly pronounced in areas where paddy fields were converted into residential land. Based on these findings, future scenarios were used to assess the sustainability of water resources. The results indicated that groundwater recharge, which accounts for 25% under baseline conditions, would decrease to 7.1% under a combined land-use and climate change scenario. In addition, recharge "hotspots" were projected to decline significantly across the watershed.

These findings highlight the vulnerability of groundwater systems in suburban watersheds and strongly suggest the need for adaptive management strategies to enhance water security and resilience.



Drivers and Impacts of Land Use Change and Climate Change on Groundwater Recharge in a Suburban Watershed

In addition to land use changes between 1987 and 2009, rising temperatures and decreasing precipitation have substantially reduced recharge rates. Future scenario projections further indicate that groundwater recharge will decline even more when land use change and climate change occur simultaneously (Kimbi et al., 2024 and this study).

Affordable and Clean Energy

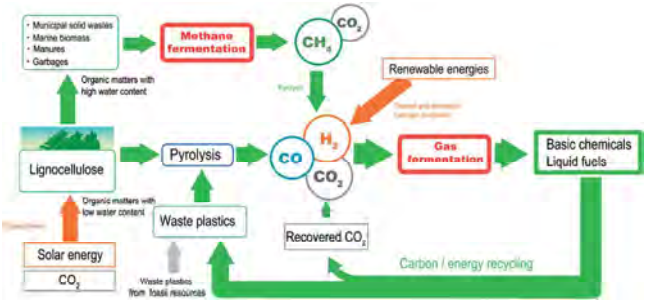
Ensure access to affordable, reliable, sustainable and modern energy for all.

Gas fermentation technology contributes to the realization of a carbon/energy recycling society

Graduate School of Integrated Sciences for Life

Professor Yutaka Nakashimada

Modern civilization is based on the supply of fossil fuels. In addition to being used as energy, fossil fuels are also used as synthetic raw materials for various carbon-based products such as plastics, paints, and clothing. In a society where fossil fuels can no longer be used, carbon should be a valuable resource. We are developing methane fermentation technology to recover carbon/energy as methane from high-moisture biomass with the help of microorganisms. Furthermore, we are challenging to develop thermophilic gas fermentation process to produce basic chemicals and liquid fuels from synthetic gas (a mixture of CO and H_2) that can be produced from various organic materials such as methane recovered by methane fermentation, low-moisture biomass such as lignocellulosic biomass, and combustible organic waste such as plastics made from fossil fuels.



With these technologies, we can recycle all organic materials currently available as carbon resources to produce various products necessary for a sustainable and comfortable life using renewable energy.

Affordable and Clean Energy

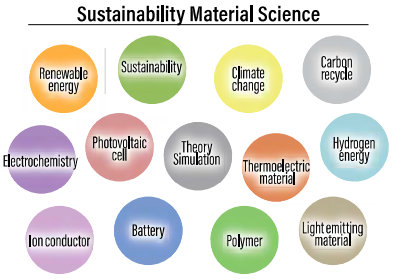
Ensure access to affordable, reliable, sustainable and modern energy for all.

Lecture: Sustainability Materials Sciences

Transdisciplinary Science and Engineering Program, Graduate School of Advanced Science and Engineering

Professor Takayuki Ichikawa / Associate Professor Hiroki Miyaoka

Science and technology enrich people's daily lives. At the same time, science and technology have caused environmental degradation. It is henceforth essential that development of science and technology have environmental protection taken into consideration. Solar cells and fuel cells are drawing attention as environmentally-friendly sources of energy. Catalysts that can capture harmful substances and have a decomposition function can contribute to resolving problems of environmental pollution. The lecture on sustainability materials science aims at helping graduate students to gain knowledge in a broad range of fields such as chemistry, condensed matter physics, and devise development, all of which are related to sustainability materials.



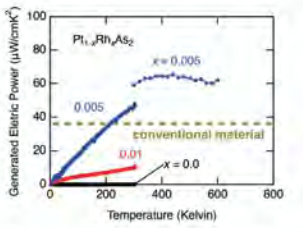
Toward the Use of Electric Energy Without Loss

Graduate School of Advanced Science and Engineering

Professor Minoru Nohara

Increase in Power Generated with Thermoelectric Materials 1.5 Times That of Conventional Generation

In modern society, waste heat is ubiquitous from power plants that use fossil fuels, to automobiles, garbage incinerators, and the remaining hot water in the bathtub. We are working to improve the performance of thermoelectric conversion materials that enable the direct extraction of electric energy from this waste heat, especially to achieve "power factors" that surpass conventional materials. In order to increase the "power factor," which is an index of electric power that can be extracted from thermoelectric materials, it is necessary to achieve both "metallic electrical conduction" and "huge thermoelectromotive force." To this end, it is necessary to create a substance with a unique band structure, such as a "multi-pocket structure" or "pudding-mold-like structure," which have large asymmetry of electron-positive hole excitation. Based on this guideline, we proceeded with research on material development and clarified that power generated with the power factor of platinum compounds with a pyrite-type crystal structure reached 1.5 times that of conventional materials. In the future, we plan to develop thermoelectric materials using less expensive elements by utilizing theoretical methods based on first-principles calculations.



Developed a thermoelectric conversion material with generated electric power 1.5 times that of conventional material

Toward Zero Electric Supply Loss: Search for Superconducting Materials at Room Temperature

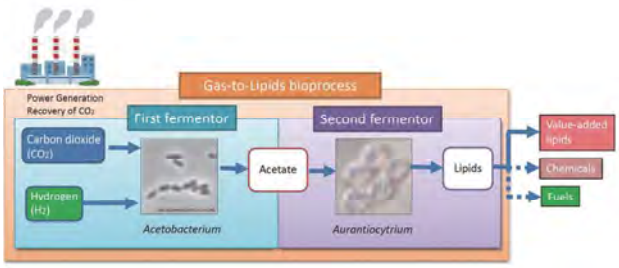
When electricity is sent from a power plant to a home or a factory, the electrical resistance of the power cables causes transmission loss. That volume has reached about 5% of the total power generated, and the power equivalent to that of several nuclear power plants is lost in Japan as a whole. This loss can be reduced to zero if we use superconductors for the power transmission lines. Superconductivity is a phenomenon in which the electrical resistance of metals and alloys becomes zero at or below a certain temperature. However, there is a problem that the temperature required to move the normal conductivity to superconductivity is very low. We are working on the development of a new material that realizes a superconducting state at a higher temperature. So far, we have developed a substance that moves into a superconductivity state at minus 226 degrees Celsius (absolute temperature: 47 Kelvin), which is the second highest temperature among iron-based superconductors. In addition, we have succeeded in reducing costs by reducing the content of rare-earths materials, such as lanthanum and praseodymium, from the proportion of 25% to 5%. In the future, our goal is to develop substances that show superconductivity at higher temperatures, preferably at room temperature.

Development of Carbon Recycling Technology

Graduate School of Integrated Sciences for Life

Professor Tsunehiro Aki / Professor Yutaka Nakashimada

We are aiming to develop carbon recycling technology that converts CO_2 emitted from thermal power generation into high-value-added products by utilizing the fermentation function of microorganisms for the purpose of sustainable utilization of limited resources and as a contribution to measures against climate change. Having set up an experimental facility next to the high-efficiency thermal power generation demonstration plant in operation on Osaki Kamijima, Hiroshima Prefecture, we are currently working on the establishment of technology for fermenting and producing lipids as a raw material for health foods, healthcare products, and chemicals with the use of CO_2 that has been separated and recovered at the plant as feed, and on the construction of the related manufacturing processes.



Decent Work and Economic Growth

Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.

Implementation of Human Augmentation Technologies

Graduate School of Advanced Science and Engineering / Director of Applied Human Augmentation Project Research Center

Professor Yuichi Kurita

The services expected from human-enhancing machines and applications are not limited to extending the motor, sensory, and cognitive abilities of individual people, or extending the skills and work performance of people using tools and machines, but also include communication, education, training, medical care, and nursing care based on a long-term understanding of the relationships between people and people, and between people and machines. The Applied Human Augmentation Project ResearchCenter aims to develop not only support systems that improve the convenience of daily life based on research seeds related to the understanding, modeling, and application of human sensory-motor characteristics, but also human augmentation technologies that cover social systems that foster richer connections between people. Our mission is to implement these technologies in society in cooperation with other universities, companies, and public institutions and to collaborate with other universities, businesses, local governments, and more to implement these technologies in society.

New COVID-19-related Research -Work Style Reform with the coronavirus disease commonplace in today's society-

Graduate School of Humanities and Social Sciences: Economics Program

Distinguished Professor KADOYA YOSHIHIKO

Emotional Status and Productivity: Evidence from the Special Economic Zone in Laos

Currently, the improvement in the workplace environment (working environment) for employees in various countries has become a major social issue – such as the "Work Style Reform" in Japan. What kind of improvement in the working environment will be beneficial to the company is not clearly defined, which is said to be a factor that hinders good progress in improving working environment. There is insufficient research on how emotions (happiness, anger, relaxation, sadness) of employees at work relates to labor productivity. As part of research activities at the Kadoya Laboratory, with the cooperation of TDK Corporation, NEC, and KP Beau Lao Co. Ltd., an experiment was carried out at a factory in the Lao People's Democratic Republic.

A unique dataset that tracks both employees' emotional states during working hours within the factory and their quantifiable output on a real-time basis were used in the study. The workers in the study were focused on a specific, unskilled task that could be easily quantified. This was intended to reduce the role of skill level in productivity to adequately compare work output as a function of emotionality. The results revealed that happiness, and no other emotional state, was significantly and positively related to increase in labor productivity.

This study examined the relationship between workers' emotional states and labor productivity by assessing on-the-job emotionality recorded using a specially designed wearable biometric device. Unskilled line workers from KP Beau Lao Co. Ltd. participated in this study. They had to answer a questionnaire, providing information on sex, age, education, work experience, living arrangement, and commute time to work, and wear a wristband biometric sensor that could capture physiological responses. The device, SilmeeTMW20, is produced by the TDK Corporation Tokyo, Japan. The device has built-in sensors to detect acceleration, pulse wave, environmental ultraviolet light, temperature, and sound through which it continuously records physical activity, beat-to-beat pulse intervals, skin temperature, and sleep. Emotional states were measured through a complex process of considering beat-to-beat pulse intervals via custom software developed by NEC Corporation Tokyo, Japan. The software uses a specific algorithm pattern of the subject's heartbeat variability to differentiate among emotional states.

Mental status, daily output, and other issues were recorded for three consecutive working days. The study examined how workers' emotional states (i.e., happiness, anger, relaxation, and sadness) were related to productivity after controlling for various biometric and demographic features. Using random effects panel regression models, we examined how productivity, operationalized as the log of daily output, was related to workers' emotional states, including the amount of time workers reported being happy, angry, relaxed, and sad. The random-effects panel regression results revealed that being happy in the workplace was significantly and positively related to increase in labor productivity.

These results have significant implications for organizational management in terms of designing work schedules and managing human resources. The changes in workers' emotional state during working hours is likely to have an important influence on labor productivity. Thus, management could improve productivity by maximizing workers' positive emotional experiences in the organizational environment. Furthermore, happy workers are not only high performers but also tend to be loyal to the organization. As a result, organizations could reduce the cost of staff turnover as well as ensuring higher productivity by maintaining an environment that makes workers happy. The study has opened up the field of employee emotions in the research on workplace management.

Figure 1. The wristband biometric device that was used in the experiment

Figure 2 Emotional status of a worker on a working day
The green (happy), red (angry), yellow (relaxed), and gray (neutral) colors represent the distribution of workers' in-the-moment emotional states during a day. The blue bar underneath the emotion graph indicates the amount of conversation. The horizontal line shows the time span during a day, and the vertical line shows workers' emotional status and conversation during that time.

A few study limitations should be noted. It was possible that the evidence of a positive relationship between happiness and productivity was influenced by the biased gender distribution of our study. In our sample, 14 out of 15 workers were female, which implied that the evidence of the relationship between happiness and productivity applies mainly to women. Thus, the results of this study should be generalized cautiously. Despite these limitations, the study provided prima facie evidence of how on-the-job emotional states might influence productivity. Future research needs to be directed towards finding a more generalized impact of emotional states on workers' productivity. Since the scope of the current study was limited to the line workers where technical skills were mostly required to conduct the job, it would be interesting to observe whether emotional conditions play different roles in other functional areas where sophisticated knowledge is required. Furthermore, the research could be extended to other sectors where employees work in a stressful environment, such as transportation and healthcare services.

[Glossary] Silmee W20: TDK Corporation's wearable biometric sensor
https://product.tdk.com/info/ja/products/biosensor/biosensor/silmee_w20/index.html
NEC Emotion Analysis Solution – custom software developed by NEC Corporation
https://jpn.nec.com/embedded/products/emotion/index.html

KENKO Investment for Health (Office Work: Financial Industry)

KENKO investment for health* related to office work is important. The Kadoya Laboratory, with the cooperation of Aioi Nissay Dowa Insurance Co., Ltd. (Tokyo, Japan), and using the software developed by NEC Corporation in Tokyo, Japan, carried out a randomized controlled trial of office workers to explore whether real-time feedback on emotional states can effectively steer subsequent health-related behavior such as breaks in the desired direction in the Japanese workplace. We compared the emotions of employees who had been randomly assigned into two groups: a treatment group with access to their objective emotional status via a smartphone and a control group without such access. As a result of the two-week trial, we found that the treatment group were more inclined to feel increase in the psychological load. The result implies that the introduction of a device that is designed to help in taking care of one's well-being including emotional health into the workplace requires a careful explanation at the time of introduction, and that, after its introduction, it is necessary to consider the "getting used to" of the user and take a somewhat long observation period.

* Note:
"KENKO investment for health" – the terminology used by the Ministry of Economy, Trade and Industry (METI) – means thinking about employee health and productivity as a management issue and implementing it as part of strategy, based on the belief that efforts to maintain and promote the health of employees and others are an investment that will have benefits such as increasing profitability in the future.

Affordable and Clean Energy

Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.

Development of a Composite Method for Carbon Fiber Reinforced Plastics (CFRP) and Cellulose Nanofibers without the Use of Chemicals

Graduate School of Advanced Science and Engineering

Professor Kazuaki Katagiri

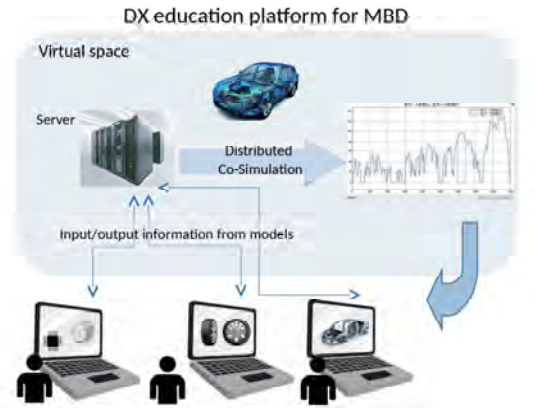
Carbon Fiber Reinforced Plastics (CFRP), known for being lightweight and high-strength, are commonly used in applications such as aircraft and sports equipment. However, the manufacturing process for CFRP is associated with a significant amount of carbon dioxide emissions. Cellulose nanofibers, derived from plants, are environmentally friendly materials with high strength and lightweight properties. Research efforts are underway to reduce carbon dioxide emissions by utilizing the composite of cellulose nanofibers with CFRP, aiming to minimize the usage of the latter. Despite the advantages, cellulose nanofibers are hydrophilic, while the resin used as the matrix for CFRP is hydrophobic, necessitating the use of chemical treatments to make cellulose nanofibers hydrophobic and increasing the environmental load as well as the production cost. In contrast, this research has developed a composite method with water-based resin, eliminating the need for chemical hydrophobic treatment.

Advanced Specialist Training Leading Digital Manufacturing

Graduate School of Advanced Science and Engineering, Smart Innovation Program/ Digital Monozukuri (Manufacturing) Education and Research Center

Associate Professor Shin Wakitani

In Japan, Digital Transformation (DX) is being promoted, demanding a transformation in work through the proactive application of digital technologies. In this context, the establishment of an environment for innovative "Digital Manufacturing" is progressing in the manufacturing industry. Model-Based Development (MBD) is a method that actively utilizes simulation models in product design and verification, allowing for the efficient realization of new product designs. Therefore, there is a need for advanced specialists who can accurately describe the elements required for product development as mathematical models and apply them in business. Hiroshima University established the "Digital Manufacturing Education and Research Center" in 2019 with support from the Cabinet Office and Hiroshima Prefecture. The center has conducted "Model-Based Development (MBD) Training" primarily for working professionals. In 2022, it was selected for the "Project to Cultivate Advanced Specialists Driving Industrial DX through the Integration of Digital and Specialized Fields" by the Ministry of Education, Culture, Sports, Science and Technology.
Based on the know-how acquired from MBD training, the center is developing a specialized training curriculum for undergraduate and Master's programs to contribute to the cultivation of talents leading the future of digital manufacturing.



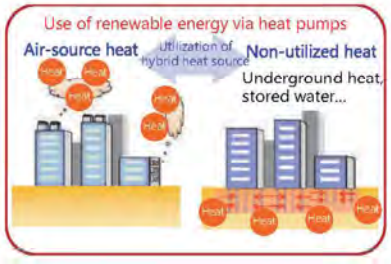
Research on Air Conditioning Systems and Utilization of Unused Energy

Graduate School of Advanced Science and Engineering

Associate Professor Sayaka Kindaichi

To reduce CO_2 emissions, improving resource utilization efficiency and implementing clean technologies are essential. Research is conducted on energy-efficient building systems, particularly in the areas of air conditioning systems and the utilization of unused energy. Recent efforts focus on the development of new systems on the demand side (building side) towards carbon neutrality such as storing surplus electricity generated by solar panels during the day as high-efficiency air conditioning hot and cold water using a ground-source heat pump. We aim to develop such demand-supply adjustment methods applicable to existing buildings.

Image of the use of renewable energy via heat pumps



Reduced Inequalities

Reduce inequality within and among countries.

Dental Care Support Activities in Cambodia

Graduate School of Biomedical and Health Sciences, Department of Pediatric Dentistry

Assistant Professor Yuko Iwamoto

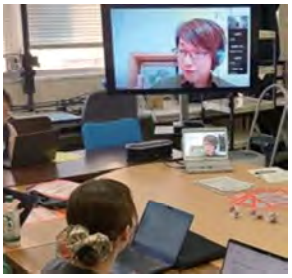
In Cambodia, the civil war led to massacres of teachers, doctors, and dentists, and the education and medical systems collapsed in the late 1970s. As a result, the supply of dental treatment, education on oral health, and training of dentists remain inadequate.
Hiroshima University School of Dentistry and the NPO "NGO Hiroshima" have been working together to provide dental care support since 2009.
With the goal of preserving the teeth of Cambodian children and realizing a peaceful and healthy life, activities are conducted in Cambodia involving Japanese dentists, dental hygienists, dental students, and general citizens.
Approximately 30 individuals travel to Cambodia each year to provide dental check-ups and treatments to around 14,000 children who have not experienced dental health examinations since 2009. Additionally, educational activities are carried out for future teachers studying at elementary schools and teacher training schools, using original picture books and puppets to teach methods of dental health guidance. These efforts aim to reduce cavities through the establishment of sustainable practices and have a broader impact on more children and future generations.
Participation is also open to Cambodian exchange students studying in Hiroshima, as well as local dentists and dental students, fostering cultural exchange and developing a global perspective. The initiative also aims to eventually pass on the leadership of activities for the autonomy of dental care in Cambodia, contributing to the training of professionals.
In March 2024, we were able to visit with undergraduate students for the first time in a long time since the COVID-19 pandemic.
We held workshops for teachers, as well as providing oral health education and dental checkups at multiple primary schools. Cambodian dentists and dental students were also welcomed into the program, and together they carried out activities for about a week.

Exploring Human Understanding and the Pursuit of Peace through the Literature of Seicho Matsumoto

Graduate School of Humanities and Social Sciences, Integrated Arts and Human Sciences Program

[Kuwajima Aesthetics Laboratory] Akiko Yanagihara, Doctoral Student

Through the diverse portrayals of humanity in the works of Seicho Matsumoto, this research seeks to deepen reflection on equality and peace, while contributing to community development and human development through the exhibition and management of literary museums.
In November 2024, she participated as a speaker in a talk event accompanying a film series based on Seicho Matsumoto's works, held at the Yamaguchi Center for Arts and Media (YCAM). Under the title "Seicho Matsumoto and Edgar Allan Poe: Writers of the Strange and Uncanny Visual World," she examined the shared aesthetic sensibilities and depth of human portrayal found in both authors' works. In March 2025, at the 352nd Research Presentation Meeting of the Western Branch of the Japanese Society for Aesthetics held at Hiroshima University, she presented a paper entitled: "The Representation of the 'Artist' in Seicho Matsumoto's Geitan: Tales of Japanese Art: Depicting the Living, Breathing Creators Behind 'Art.'"
Focusing on both the struggles of master artists and the lives of lesser-known craftsmen, she discussed the diversity of artistic figures and the nature of aesthetic sensibility.
Furthermore, in June 2025, as part of the "Curator Talk Project" organized by Professor Hideki Kuwajima's seminar, she delivered a public online presentation titled: "What Do Literary Museums Bring to Us? The Mission and Challenges of the Kitakyushu Municipal Seicho Matsumoto Memorial Museum." In this presentation, she introduced examples of community building, human development, and collaboration among industry, government, and academia, while outlining future prospects.
Currently (September–November 2025), she serves as the chief curator of the special exhibition marking the 80th anniversary of the end of World War II, titled: "Landscapes of a Military City and the Shadow of Occupation: Seicho Matsumoto Before and After the War." Through Matsumoto's works, the exhibition poses the question "What is peace?" from social and cultural perspectives.



10 REDUCED INEQUALITIES

Reduced Inequalities

Reduce inequality within and among countries.

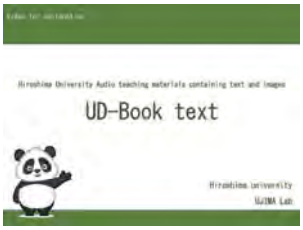
Support for Reading Environments for All Students

Graduate School of Humanities and Social Sciences

Professor Kazuhito Ujima

Developing Reading Environments for All Students with School Libraries being the Base Point

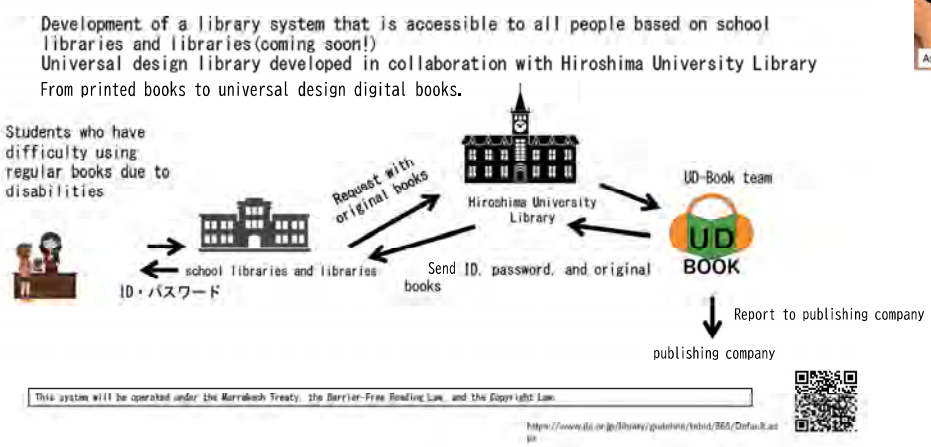
We aim to create a society where individuals facing difficulties in accessing paper-based books can access various textual information. To achieve this goal, we have developed and provided the UD-Book standard, a universal design book. We have already supplied UD-Book textbooks to elementary and middle school students nationwide through various initiatives. However, even if access is limited to textbooks, it represents only a small portion of the textual information available to students. Therefore, in collaboration with Hiroshima University Library, we are working on building a system for the production and provision of UD-Book materials. Citizens worldwide who find it challenging to access printed textual information due to conditions such as developmental disorders can request borrowing UD-Book materials from Hiroshima University Library through school and public libraries. In response to such requests, we are providing online UD-Book book lending service.



UD-Book (Universal Design Book): Accessible to Everyone

We are producing textbooks that are accessible to everyone. In collaboration with Hiroshima University Library, we have undertaken a project commissioned by the Ministry of Education, Culture, Sports, Science, and Technology (MEXT) to create and provide audio materials. These audio materials are textbooks equipped with features like text-to-speech functionality, designed for students facing difficulties using approved textbooks due to developmental disorders and similar conditions. The audio materials produced by Hiroshima University are based on the UD-Book standard, developed from our research achievements. In the fiscal year 2023, we delivered 703 items to 155 elementary and middle school students nationwide.

The UD-Book standard has the potential for various applications beyond textbooks, contributing significantly to the realization of universal design in reading, as aimed by international agreements such as the Marrakesh Treaty and the Textbook Barrier-Free Law.



Seeking Solutions for Individuals Facing Difficulty in Reading

I along with undergraduate and graduate students, and researchers in our laboratory, aim to understand the causes of reading difficulties in individuals such as those with developmental or visual impairments. Our goal is to establish methods for assessing reading difficulties and propose solutions for individuals facing challenges in reading. Our research covers a broad spectrum, including (1) investigations into the fundamental characteristics of reading, (2) comparisons between reading in paper and digital textbooks, (3) verification of the effectiveness of commonly used aids such as audio and highlighting during reading support, (4) studies on the discomfort caused by discrepancies between the manipulation of reading content and the corresponding audio, and (5) research on Braille standards based on individual discrimination thresholds. To conduct these studies, we incorporate various devices such as screen-type eye-tracking devices, glasses-type eye-tracking devices, NIRS (Near-Infrared Spectroscopy), 3D motion capture, refraction measurement devices, and devices for measuring field of view and contrast sensitivity.

Practical School Support for "Reading and Writing" in Learning Town & Gown Initiatives to Achieve Satisfactory Reading for All Citizens

Ujima Laboratory, collaborates with schools to advance learning support using Information and Communication Technology (ICT). Since the year 2000, we have been empirically researching the effectiveness of utilizing ICT, such as tablets, in supporting learning methods for students who find reading or writing challenging. Currently, rather than conducting these studies solely within the laboratory, we are working in partnership with local elementary and middle schools. Through this collaboration, we analyze case studies on the introduction of ICT as assistive technology in schools. The aim is to develop practical research that can guide the implementation of similar initiatives in schools nationwide. Sachiyo Yamashita, a researcher and second-year doctoral student, is the core member of this research.


Assistive technology for students with reading difficulties


Assistive technology for students with writing difficulties

Sustainable Cities and Communities

Make cities and human settlements inclusive, safe, resilient and sustainable.

Disaster Education and Disaster Reduction Research for Resilient and Sustainable Urban Development

Resilience Research Center

Creation of Resilient and Sustainable Cities through Disaster Education and Disaster Reduction Research

From April 21 to 25, 2024, Professor Yasuhiro Kumahara, a researcher in the field of human and social resilience research, information dissemination, information management, and disaster archive at the Resilience Research Center, held a five-day exhibition titled "Touch the Indo-Eurasian Plate Boundary: An Exhibition of Peeled-off Earthquake Fault of Nepal Himalaya." The exhibition was held at the exhibition hall of the Nepal Academy of Fine Arts in the center of Kathmandu, Nepal in collaboration with the Department of Geology, Trichandra Campus, Tribhuvan University. Exhibited at this exhibition were: actual sample of seismic faults stripped of the plate boundary, posters with a width of 6 meters × a height of 3 meters of earthquake faults, 3D models of the Nepalese Himalayas, explanatory panels on earthquakes and faults, etc. The exhibition aimed at raising awareness of future large earthquakes and fostering understanding of the relationship between active faults and the formation of the Himalayan Mountains based on scientific knowledge.
The exhibition was visited by more than 800 visitors over the course of five days. In the questionnaire, many people commented that they could deepen their understanding of active faults and massive earthquakes. The exhibition materials created this time have been created so that they can be used repeatedly, and we are thinking of exhibiting them on other occasions in the future. This exhibition benefited from Grants-in-Aid for Scientific Research (18KK0027).

Explaining a 3D model of the Nepalese Himalayas

Explaining stripped earthquake fault sample

Poster for the exhibition

Posters of fault outcrops and members preparing for exhibition

FY2024 "Resilience Research Center Meeting with Collaborating Local Governments"

On June 3, 2024, the Hiroshima University Resilience Research Center held the "FY2024 Resilience Research Center Meeting with Collaborating Local Governments" at Hiroshima University, with the participation of representatives from the crisis management department of Hiroshima Prefecture, 19 municipalities in the prefecture, and Iwakuni City, Yamaguchi Prefecture.
From the local governments' side, 21 people attended the meeting in person, and 15 municipalities and 5 fire departments attended online. In addition, eight people from Hiroshima University, including President Mitsuo Ochi and Director of the Resilience Research Center Masahiro Kaibori, attended the meeting.
First, Director Masahiro Kaibori reported recent work of the Hiroshima University Resilience Research Center, such as "releasing archives created in cooperation with local governments, raising awareness of disaster prevention knowledge in cooperation with the media, human resource development for Hiroshima Prefecture municipal officials, participation in "Bosai Kokutai", and finally the status of research for the prevention and mitigation of landslides (Joint research with Higashihiroshima City: Elucidation of the relationship between heavy rainfall and changes in groundwater level and water pressure for prediction of the occurrence of debris flows, etc., and spatial grasp of the relationship)".
Next, Professor Hideaki Goto of the Graduate School of Humanities and Social Sciences gave a report on "The terrestrial upheaval that took place during the 2024 Noto Peninsula Earthquake and Active Faults in Hiroshima Prefecture" as an introduction to Hiroshima University's research, stating that "we continue to discover active faults that have not been evaluated by deciphering three-dimensional topography in 3D in an analog and artisanal manner, and by expressing and analyzing digital big data for interpretable materials from a bird's-eye view."
Next, Mr. Masahiko Tachikawa, Counsellor at the Crisis Management Division, Hiroshima Prefectural Government, and Mr. Katsutoshi Honda, Assistant Director, Disaster Prevention Division, Hiroshima City Crisis Management Office, reported on Hiroshima Prefecture's and Hiroshima City's disaster prevention measures, respectively.
Lastly, Mr. Takayuki Tokuhiro, Director of the Hiroshima Local Meteorological Office, reported on Japan Meteorological Agency's efforts to improve the accuracy of forecasts of linear precipitation zone (improvement in accuracy of information).
During the meeting, opinions were expressed on the need to develop disaster prevention human resources in order to deepen understanding of disasters not only among public administrators but also among residents. Overall, it was a fruitful meeting with collaborating local governments, which was helpful for deepening understanding of disaster prevention and mitigation in the season when disasters are more likely to occur.

Sustainable Cities and Communities

Make cities and human settlements inclusive, safe, resilient and sustainable.

Research on Building an Efficient and Sustainable Social Security System

Graduate School of Humanities and Social Sciences, Department of Law

Professor Takahiro Tezuka

Research on Constructing an Efficient and Sustainable Social Security System

We are conducting research on the structure of the social security system in the midst of a financial crisis. In particular, our research focuses on medical care, long-term care, and pensions, aiming to propose an efficient and sustainable social security system and policies that can provide peace of mind to future generations.

Education on the Sustainability of Cities, Legal Interpretation, and Legal Policies

In the administrative law classes offered in the Faculty of Law, we teach administrative law related to cities. Within this context, we cover legal systems related to urban planning and land use planning, providing education on the sustainability of cities, legal interpretation, and legal policies.

BCP Training for Nurses Working at Visiting Nursing Stations to Protect Community Residents' Nursing Care and Health

Hiroshima University, Graduate School of Biomedical and Health Sciences

Associate Professor Mayumi Kako

In Japan, community-based healthcare has been increasingly promoted, and more people are living in their communities while managing disabilities or chronic illnesses. One of the key community healthcare services is visiting nursing stations. The individuals served by nurses working at these stations are often among the most vulnerable during disasters—those who may have difficulty evacuating or are unable to independently request assistance.

Because visiting nurses provide ongoing care to these individuals in their daily lives, any disruption of services during a disaster can lead to deterioration in health conditions and potentially result in disaster-related deaths. Since 2021, all long-term care service providers in Japan have been required to formulate Business Continuity Plans (BCPs), conduct related training, and carry out drills.

This training program was established as an opportunity for visiting nursing professionals to examine how to protect community residents and ensure the continuity of services as care providers. The sessions featured active discussions, questions, and exchanges of practical challenges faced in disaster preparedness and response.

The Aesthetics of Celtic Sensibility and the Philosophy of Harmony with Nature (Land & Sea) : Cultural Diversity and Affinity between Japan and Ireland

Graduate School of Humanities and Social Sciences

Professor Hideki Kuwajima

Through philosophical research on concepts of beauty and sensibility rooted in Ireland, an island nation at the western edge of Europe this project explores the Celtic spiritual worldview, particularly its philosophy of harmony with nature embedded in land and sea. With attention to biodiversity and the internalization of narrative traditions, the research seeks to generate ideas that can inform contemporary social policy and cultural administration, while also promoting international exchange between Japan and Ireland.

During a visit to Dublin from March to April 2024, Professor Kuwajima delivered a lecture at University College Dublin on the aesthetics of the sublime, drawing a comparison between the sensibilities of the 18th-century aesthetician Edmund Burke and Lafcadio Hearn (Koizumi Yakumo). In June 2024, he organized an after-talk event at a cinema in Hiroshima focusing on the Irish animated film Song of the Sea, a mythic story depicting the relationship between a selkie (seal fairy) and a young girl's family

on Ireland's northwestern coast. In July 2025, he similarly featured the Irish animated film Puffin Rock, a children's tale portraying puffins (Atlantic puffins) and their small animal companions living on a remote island off Ireland's western coast. Through these Irish animated works, he facilitated post-screening discussions that highlighted themes of nature, storytelling, and cultural affinity between Ireland and Japan.

* Prof. Kuwajima's project to be granted by Window Research Institute of YKK in academic year 2026-27.

Responsible Consumption and Production

Ensure sustainable consumption and production patterns.

Research on Visualizing Marine Plastic Waste

Graduate School of Advanced Sciences of Engineering

Associate Professor Yuji Sakuno

With a growing global interest in ocean plastic, exemplified by the imposition of charges for convenience store plastic bags, understanding the actual situation of marine plastic waste is crucial. In our laboratory, we conduct foundational research using remote sensing technology to explore and visualize marine plastic waste non-invasively. This involves studying the reflection of plastic on the coast and engaging local high school students in visualizing plastic research challenges.

Balloon experiment

Spectral reflectance measurement of plastic waste

Turning Horse Manure into a Resource: The 'Champion Compost' Recycling Initiative of the Hiroshima University Equestrian Club

Hiroshima University Equestrian Club

Captain Ryo Motohashi

The Hiroshima University Equestrian Club has launched a recycling initiative called "Champion Compost," which circulates and reuses the large amounts of horse manure inevitably generated through its daily training activities aimed at becoming the top national university equestrian team in Japan. By fermenting horse manure and processing it into safe compost for distribution to the local community, the club reduces waste while contributing to the promotion of sustainable agriculture that does not rely on chemical fertilizers. Farmers and households that have used the compost report that "vegetables and flowers grow very well," and it is gradually becoming established as a trusted local brand. This initiative directly contributes to SDG Goal 12, "Responsible Consumption and Production." It also creates a small but meaningful cycle: crops are grown using compost derived from horses, and those crops are, in turn, fed back to the horses.

Furthermore, through the annual "Horse Fest" event organized by the Equestrian Club to promote community engagement and environmental education visitors can purchase vegetables grown with "Champion Compost" and participate in horseback riding experiences. These activities provide enjoyable opportunities for attendees to learn about the SDGs. The initiative has also expanded into educational outreach, including learning sessions with elementary schools, and has been recognized as an official SDGs Partner of Higashi-Hiroshima City. By transforming horse manure into a valuable resource, this initiative represents an important step toward protecting the environment and supporting the sustainable future of the local community

13 CLIMATE ACTION

Climate Action

Take urgent action to combat climate change and its impacts.

Development of Cattle Farming Techniques to Reduce Methane Gas Emission from Burps

Graduate School of Integrated Sciences for Life

Professor Taketo Obitsu

The methane gas produced in the stomachs of cattle is released into the atmosphere through burps, significantly impacting global warming. The Hiroshima University farm is conducting research aimed at developing cattle farming techniques to reduce methane gas emissions. For example, as part of a commissioned project by the Ministry of Agriculture, Forestry, and Fisheries titled "Development of the GHG Mitigation Technology in the Livestock Sector," the research measures methane gas emissions from cattle under rearing conditions. The study verified that

providing a small amount of liquid derived from cashew nut shells (commercially available as feed to regulate the stomach condition of cattle) resulted in a reduction in methane emission rates.

Investigation and Research on the Interaction between Aerosol Particles and the Marine Ecosystem

Graduate School of Integrated Sciences for Life

Associate Professor Yoko Iwamoto

Aerosol particles contain substances such as nitrogen, phosphorus, and iron. When these substances settle on the ocean surface, they can supply nutrients to plant plankton, contributing to the growth of plant plankton. The growth of plant plankton, in turn, influences the concentration of trace substances in seawater, affecting the generation and composition of aerosol particles of marine origin. Aerosol particles act as the Earth's "sunshade" by directly scattering sunlight or serving as nuclei for cloud particles. To refine future climate change predictions, it is essential to understand the physical and chemical characteristics of aerosol particles originating from the ocean, which covers about 70% of the Earth's

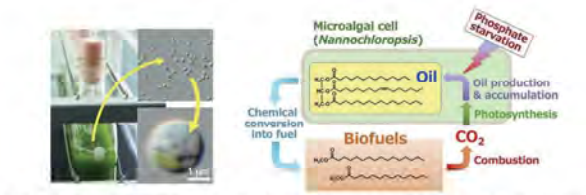
surface. To achieve this, atmospheric observation devices have been installed on campus, coastal sites, and ships to measure aerosol particles in various marine areas.

Carbon-Neutral Biofuel Derived from Microalgae

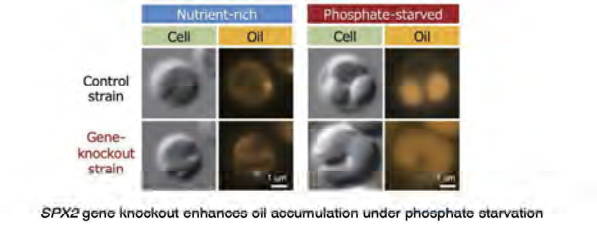
Graduate School of Integrated Sciences for Life

Professor Atsushi Sakamoto

To address global warming, it is essential to significantly reduce CO_2 emissions from internal combustion engines, such as those used in automobiles. In pursuit of practical applications of carbon-neutral biofuels as an alternative to fossil fuels, we are collaborating with Mazda Motor Corporation to research and develop mass-production technologies utilizing microalgae. "Carbon-neutral biofuel" refers to fuel that does not increase net CO_2 emissions even when used repeatedly. The CO_2 released during combustion is recaptured through photosynthesis, and new fuel is produced from the resulting photosynthetic products, thereby creating a closed carbon cycle. Microalgae are microscopic plant plankton invisible to the naked eye. Like terrestrial plants, they use sunlight to perform photosynthesis, synthesizing carbohydrates from CO_2 and water. Excess carbohydrates are converted into starch and oils, which accumulate within the cells. These oils can be converted through relatively simple chemical processes, into fuels suitable for automobiles.
Although each microalgal cell is extremely small, ranging from a few to several tens of micrometers, and contains only a minute amount of oil, their unicellular nature allows them to proliferate rapidly in liquid culture media. (A liquid culture medium is a nutrient solution, without solid components, that provides the necessary environment and dissolved nutrients for cultivating microorganisms or biological tissues.) Because



Biofuel production from the microalga *Nannochloropsis* toward a carbon-neutral society



SPX2 gene knockout enhances oil accumulation under phosphate starvation

microalgae can multiply in large quantities within a short period, they hold great promise for the large-scale production of oil as a renewable fuel resource.

Life Below Water

Conserve and sustainably use the oceans, seas and marine resources for sustainable development.

Kure City–Hiroshima University Town & Gown Initiative: "Kure Maritime Expo 2025 – Ocean Cultural City Kure"

Kure City–Hiroshima University Town & Gown Office

Specialist, Satomi Mito

On May 31 and June 1, 2025, the "Kure Maritime Expo 2025 – Ocean Cultural City Kure" was held at the Japan Coast Guard Academy in Kure City as part of the Kure City–Hiroshima University Town & Gown Initiative.
This annual event, organized by the Ocean Cultural City Kure Promotion Council, aims to spark children's interest in the ocean through hands-on activities and experiential programs. At the same time, companies, organizations, and educational institutions involved in marine and maritime fields gather to introduce their business activities and present the latest research trends.
The expo serves to widely promote efforts to establish Kure City as a hub for marine and maritime industries, contributing to the realization of Kure as an "Ocean Cultural City."

Website:https://www.hiroshima-u.ac.jp/kuretgo/news/90702

Observing the interior of a car carrier ship through a VR video

Touch pool to interact with marine creatures such as sharks, horseshoe crabs, and hermit crabs

Children's seminar by researchers from the Japan Aerospace Exploration Agency (JAXA)

Scene from the opening program, from left: Mayor Shinbara of Kure City, Hiroshi Kaneko, Executive Vice President of Hiroshima University, Tsutsui, President of the Japan Coast Guard Academy, and Takaya, Senior Researcher at the Sasakawa Peace Foundation Ocean Policy Research Institute

Development of a Water-Lifting Device Using Solar Panels for Increased Oyster Production and Contribution to SDGs

Graduate School of Integrated Sciences for Life, Department of Applied Biological Sciences

Professor Kazuhiko Koike

We developed a device that combines solar panels with a simple water-lifting pump, capable of lifting 10 tons of seawater per hour from the seabed. By installing this device on oyster farming rafts and continuously lifting nutrient-rich seabed water containing phytoplankton, which serves as nutrition and feed for oysters, we observed a 50% or more increase in the weight of edible part of oysters after a few months. Oyster farming, a typical non-feeding fish culture method , has a purifying effect on the sea and is considered one of the most desirable methods of food production. Additionally, oyster production using this device is directly linked to various SDGs, as the shells (calcium carbonate) fix a significant amount of carbon dioxide.

Life Below Water

Conserve and sustainably use the oceans, seas and marine resources for sustainable development.

Halting "Coral Bleaching" with the Power of Giant Clams

Graduate School of Integrated Sciences for Life, Department of Applied Biological Sciences

Professor Kazuhiko Koike

"Coral bleaching," where corals lose symbiotic algae (dinoflagellates) in their bodies, is a global issue. In this study, we utilize giant clams possessing similar symbiotic algae, other than corals, and propose using undigested symbiotic algae released as feces as a symbiotic source for corals. In collaboration with Miyakojima City, Okinawa, and the Diver's Association (Yabiji Coral Conservation Society), we conduct offshore mixed cultivation of corals and giant clams. Efficient supply of symbiotic algae from giant clams is expected to revive coral reefs.

International CO2 Natural Analogues Network (ICONA)

Seto Inland Sea Carbon-neutral Research Center

Professor Shigeki Wada

International CO2 Natural Analogues Network (ICONA) is an international network that connects researchers who are projecting the future of marine ecosystems under the progress of climate change by utilizing areas with locally high CO2 environments. It is a project that contributes to the prediction of the future of the ocean and the formulation of adaptation measures to climate change. It is certified as a Decade Action of the United Nations Decade of Ocean Science for Sustainable Development (UN Ocean Decade).

The network aims to build resources to understand the ecosystem-level effects of ocean acidification using natural high-CO2 ecosystems and is supported by the Japan Society for the Promotion of Science (JSPS) as core-to-core funding (Advanced Research Network) for 2021-2026.

In this project, we are mainly conducting research in volcanic CO2 seeps, and we are predicting the future of ecosystems that will change in the future (due to the influence of CO2 emitted by humans) in an environment with high CO2.

This network was launched in April 2021, and the partner institutions in Japan are as follows.

- University of Tsukuba
- National Institute of Advanced Industrial Science and Technology (AIST)
- Kochi University
- Nara Women's University
- Okinawa Institute of Science and Technology Graduate University
- University of the Ryukyus
- Hiroshima University

Surveying in volcanic CO2 seeps

Community Contribution Voyages for Elementary, Junior High, High School Students, and Adults

Faculty of Applied Biological Science / Training Ship Toyoshio-maru

FY2024 Community Contribution Voyages Conducted by the Training Ship Toyoshio-maru

In fiscal year 2024, a total of nine community contribution voyages were conducted aboard the training ship Toyoshio-maru, with 260 participants in total.

Participants included high school students from Yasuda Girls' High School, Hiroshima Kokutaiji High School, Hiroshima University Senior High School, Saijo Agricultural High School, and Kure Miyahara High School. In addition, elementary, junior high, and high school students and adults participated through organizations such as the Etajima Youth Exchange Center, the Iwakuni Microbiology Museum, and the Hiroshima City Asa Zoological Park. Elementary school students from Koya Elementary School in Higashi-Hiroshima City also took part.

These voyages provided educational programs that enabled participants to learn about the current conditions of the Seto Inland Sea and to experience scientific approaches to understanding aquatic environments. Through hands-on, field-based learning, the program promoted awareness and practical education aimed at "conserving the richness of the sea."Faculty members from the Faculty of Applied Biological Science Kaori Wakabayashi, Toshiya Hashimoto, Osamu Otsuka, and Yoichi Sakai provided instruction alongside Captain Kazumitsu Nakaguchi and the crew of the Toyoshio-maru.

Life on Land

Protect, restore and promote sustainable forests, combat desertification, and halt use of terrestrial ecosystems, sustainably manage and reverse land degradation and halt biodiversity loss.

The Natural Environment of Hiroshima University's Campus Certified as a 'Nature Coexistence Site' by the Ministry of the Environment

Hiroshima University Museum

Technical Assistant, Seiji Ikeda

Since the opening of the Hiroshima University Museum, we have promoted the concept of the entire campus as a museum. At the heart of this vision is the nature trail known as the "Discovery Path." Around Budō Pond, Yamanakatani River, and Kakuwaki River located near the center of the campus, rich waterside ecosystems support a wide variety of living organisms. In collaboration with Mr. Tsuneo Shioji of the Higashi-Hiroshima Botanical Garden and the museum's certified student volunteers (CSR: Campus Student Rangers), we have conducted biodiversity surveys, engaged in satoyama conservation activities, and carried out educational outreach programs such as field navigation tours.

The results of our biodiversity surveys have been actively published in the museum's research reports, contributing to the accumulation and dissemination of knowledge. As a result of these ongoing efforts, the number of endangered plant and animal species identified on campus exceeded 100 in 2023. At the same time, access to our Digital Museum through which we share biodiversity information has steadily increased, reflecting growing recognition of the campus's rich biodiversity and its educational value.

In light of these achievements, we began coordinating with the university at the end of 2023 and submitted an application in March 2024 for designation as a "Nature Coexistence Site" by Japan's Ministry of the Environment. The application was made possible thanks to a proposal and support from Mr. Yuki Samejima (Fukken Co., Ltd.), a former CSR student volunteer who had assisted with the Digital Museum during his student years.

After successfully passing the review process, the campus area was officially certified on September 27, 2024, as a Nature Coexistence Site (First Half of FY2024) by the Ministry of the Environment, in recognition of its contributions to biodiversity conservation. Among the 69 sites certified in the first half of FY2024, only two university applications Hiroshima

University and Yokohama National University were approved, bringing the cumulative total of certified university sites to ten.

The certified area will be registered in the international OECM (Other Effective Area-Based Conservation Measures) database. Through this registration, the site will directly contribute to achieving the global "30by30" target protecting at least 30% of terrestrial and marine areas by 2030 as well as the Kunming-Montreal Global Biodiversity Framework, which aims to halt and reverse biodiversity loss ("Nature Positive") by 2030.

Hiroshima University will continue to utilize its rich natural campus environment for student education while preserving it for future generations. In doing so, the university seeks not only to contribute to achieving the 30by30 target but also to promote sustainable initiatives that integrate biodiversity conservation with climate change mitigation. The Hiroshima University Museum hopes to continue playing an active role in advancing these efforts.

Elucidating Pollinating Insects and Monitoring Deer Herbivory for the Conservation of Wetland Plants

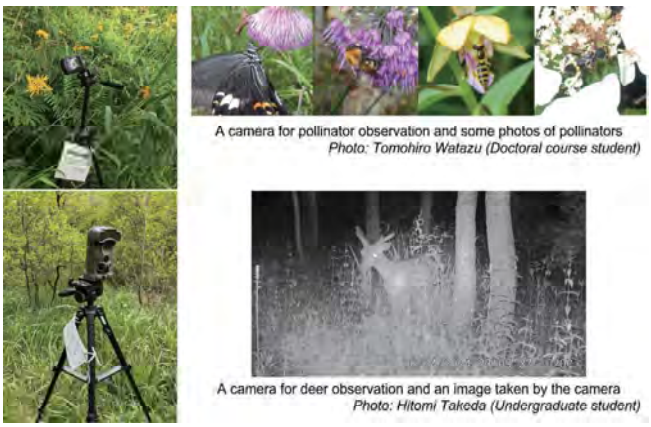
Graduate School of Advanced Science and Engineering

Professor, Tetsuro Hosaka

Wetland ecosystems provide critical ecosystem services, including carbon sequestration, disaster mitigation, and biodiversity conservation, yet they are among the most globally degraded and declining ecosystems. Wetland-adapted plant species, in particular, include many rare species, making their conservation an urgent priority. However, much remains unknown about their reproductive strategies, including which insects are responsible for pollination.

This project aims to comprehensively identify the insects involved in pollination for plant species growing in wetland clusters across Shimane and Hiroshima Prefectures, using direct observation and automated camera recordings. The goal is to develop wetland management strategies that consider the conservation of these pollinating insects alongside the plants themselves.

Additionally, as deer herbivory is an increasing threat to wetland plants nationwide, the project includes monitoring the impacts of deer feeding and evaluating measures to mitigate this damage.



A camera for pollinator observation and some photos of pollinators
Photo: Tomohiro Watazu (Doctoral course student)

A camera for deer observation and an image taken by the camera
Photo: Hitomi Takeda (Undergraduate student)

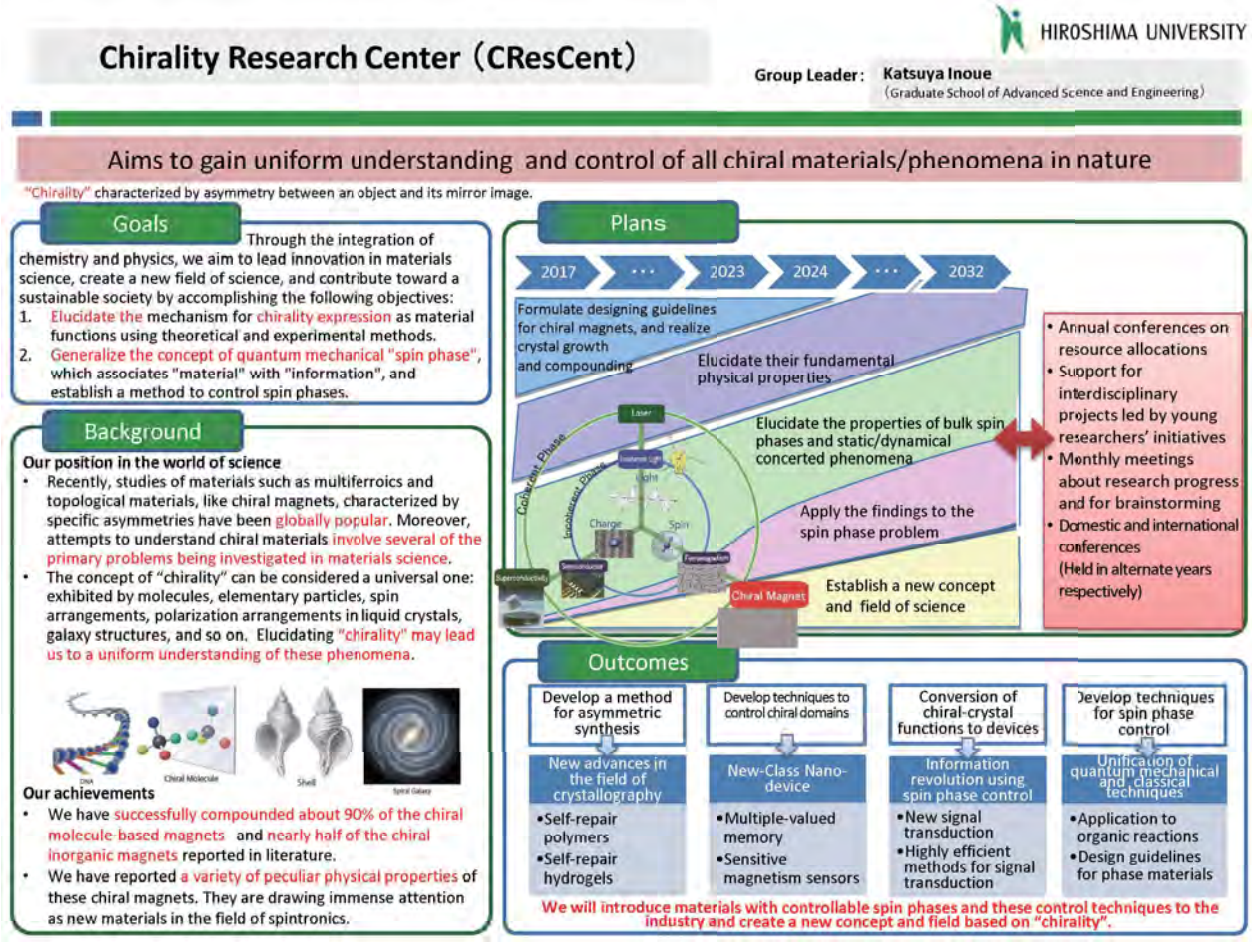
Protect, restore and promote sustainable forests, combat desertification, and halt use of terrestrial ecosystems, sustainably manage and reverse land degradation and halt biodiversity loss.

Towards the Comprehensive Understanding and Control of Chiral Substances and Phenomena in Nature

Graduate School of Advanced Sciences and Engineering

Professor Katsuya Inoue

Chirality refers to the property where a structure cannot be overlaid with its mirror image, much like the right and left hands. In recent years, research on substances exhibiting asymmetry has been globally promoted, with a particular emphasis on understanding chiral properties, making it one of the most important themes in the field of material science. The Chirality Research Center (CResCent) aims to achieve an understanding of the mechanisms by which chirality is expressed as a material's function and the establishment of phase control methods. The center strives to contribute to the realization of a sustainable society by applying these findings to industry, creating new fields and concepts in material science.



Development of dung beetle database as a tool for supporting biodiversity monitoring by non-experts in Southeast Asia

Graduate School of Advanced Science and Engineering

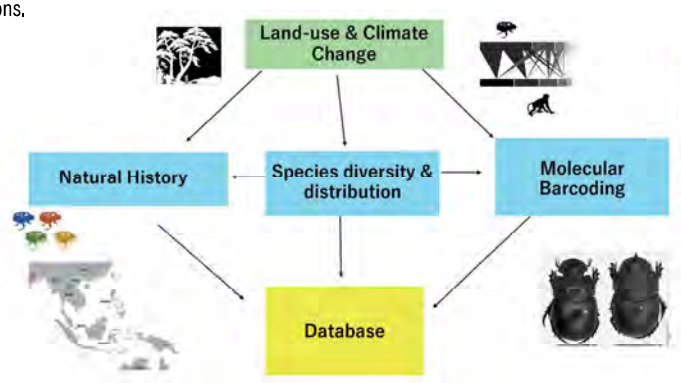
Professor Tetsuro Hosaka

The reduction and degradation of tropical forests, along with the loss of biodiversity, are major environmental and social issues in tropical regions. Furthermore, recent studies have reported a global decline in insect populations and the subsequent impacts on ecosystem functions. However, understanding where and how insects are declining and how these declines are affecting ecosystems depends on accurate identification and distribution information of insects. Unfortunately, such information is not yet available for many insect groups in Southeast Asia.

Dung beetles, which feed on the feces of mammals and other animals, are an important group in this context. They are relatively easy to collect and are sensitive to changes in forest environments. Their diversity reflects the diversity of other animal groups, such as large mammals, making them well-known as excellent environmental indicator species for tropical forests. In addition, dung beetles play vital ecological roles, such as nutrient cycling by rapidly burying large quantities of feces in the soil, secondary seed dispersal of seeds mixed in the feces, and the mitigation of greenhouse gas emissions.

Despite their importance, there is currently no comprehensive guide or database for dung beetles, and species identification still heavily relies on a small number of taxonomic experts. Therefore, it is necessary to organize and cross-check existing data, such as literature, museum specimens, and undocumented expert knowledge, and translate this knowledge into a user-friendly format for local non-specialists. If achieved, this would become a powerful tool for enabling independent and sustainable biodiversity monitoring in tropical regions.

This project aims to create a dung beetle database for Southeast Asia, which will be accessible and usable by non-experts. The database will be built based on numerous specimens collected by researchers from Singapore and Japan, who lead dung beetle research in Southeast Asia. Furthermore, the project will investigate factors influencing dung beetle diversity at large scales, including land-use changes and climate change. The project is a collaborative effort between Hiroshima University and Nanyang Technological University, Singapore.



First workshop with Nanyang Technology University at Kyoto (30-31 August, 2024)

Effective Utilization of Chicken Manure Compost in Paddy Rice Cultivation

Program of Bioresource Science,Graduate School of Integrated Sciences for Life

Associate Professor Toshinori Nagaoka

Our country depends on imports for much of our livestock feed. It also means that we are also importing nutrients for our crops. Composting the discharged livestock manure and making effective use of the nutrients it contains can result in reduced use of chemical fertilizers, and contribute to promoting sustainable food production and curbing global warming. In addition, due to the recent depreciation of the yen and the international situation, there are concerns about securing chemical fertilizers, which depend on imports for most of the raw materials, and soaring fertilizer prices, and the need to make effective use of compost is rapidly increasing.

In joint research with JA ZEN-NOH Hiroshima, we are verifying the effectiveness of applying chicken manure compost in paddy rice cultivation, where mainly chemical fertilizers have been used and compost has not been used much in the past, in order to make effective use of unused useful resources in the region. We are investigating the effects of chicken manure application amount, fertilization timing, cultivation management, etc. on the growth and yield of paddy rice, with the aim of promoting sustainable rice production.

Protect, restore and promote sustainable forests, combat desertification, and halt use of terrestrial ecosystems, sustainably manage and reverse land degradation and halt biodiversity loss.

Public Outreach Activities of the Amphibian Research Center

Amphibian Research Center

Project Office Director, Ichiro Tazawa

As part of a joint high school–university collaboration lecture organized by the Education Network Chugoku and Hiroshima University's public lecture program, we held a seminar titled:
"Surprising Facts About the Japanese Giant Salamander and Its Conservation Activities."
This outreach initiative aims to promote environmental conservation centered on satoyama landscapes and traditional rural ecosystems where the Japanese giant salamander can thrive. By raising awareness about the species and its habitat requirements, the program contributes to broader efforts to protect biodiversity and local natural environments.
The event was conducted in collaboration with Associate Professor Norio Shimizu of the Hiroshima University Museum, who is widely recognized in Hiroshima Prefecture for his work in Japanese giant salamander conservation.

Unveiling diversity of insect seed predators in tropical rainforests

Graduate School of Advanced Science and Engineering

Professor Tetsuro Hosaka

Conservation of biodiversity is one of the most urgent global challenges, but we still do not know how many species of organisms exist on Earth. In particular, the majority of insects inhabiting tropical rainforests remain undiscovered, and their species count is thought to have a significant impact on the estimated total number of species on Earth. Among these, seed-feeding insects that parasitize plant seeds are a particularly poorly studied group due to their high host specificity (i.e., different insect species depend on different plant species). Southeast Asian lowland tropical rainforests, in particular, are known for having many tree species that flower only once every few years, making information on seed-feeding insects in these forests extremely scarce. The aim of this project is to conduct a comprehensive survey and study of seed-feeding insects on tree species growing in the lowland tropical rainforests of Malaysia. This project is a collaborative research between Hiroshima University and the Forest Research Institute Malaysia (FRIM).

Peace, Justice and Strong Institutions

Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective , accountable and inclusive institutions at all levels.

Developing Body Mapping as a Tool for Transferring Memories of A-Bomb Experiences

Research Center for Diversity and Inclusion, Institute for Diversity and Inclusion **Professor Machiko Oike**
The Center for Peace and the Graduate School of Humanities and Social Sciences **Associate Professor Luli van der Does**

Body mapping is an art-based therapy and advocacy practice in which one draws one's life details in words and images in and around the life-sized figure of one's body traced onto a sheet of paper approximately 1 by 2 meters. The Research Center for Diversity and Inclusion (Machiko Oike) and the Center for Peace (Luli van der Does), supported by Grants-in-Aid for Scientific Research - KAKENHI – provided by Japan Society for the Promotion of Science (JSPS) and other contributions, applied body mapping to transfer memories of A-bomb survivors. We facilitated youth and survivors to co-create a map of the survivors while helping the youth to interview the survivors. In carrying out the project, we collaborated with an NGO, the Sekohei Art Exhibition Committee, and the Hiroshima High School Peace Study Group (Kokosei Heiwa Zeminar). The maps were exhibited at the Sekohei Museum of Art.

Peace Building and Prevention of Violent Extremism through Education for African Youth through Teacher Development

Center for the Study of International Cooperation in Education (CICE)

CICE has designed and operated about 10-day field visits and training in Hiroshima, Nagasaki, and Tokyo as part of the training project "Peace Building and Prevention of Violent Extremism through Education for Youth through Teacher Development in the Sahel," which is conducted by the UNESCO's International Institute for Capacity Building in Africa (UNESCO-IICBA) with support from the government of Japan. The training was carried out online in the fiscal year 2020. Until the fiscal year 2019, however, CICE had accepted around 30 trainees each year, including senior officials from the African Union and educational administrators from more than a dozen African countries, and had carried out the program that included:

1). lectures and workshops at Hiroshima University;
2). opportunities to visit the Hiroshima Peace Memorial Museum and the Nagasaki Atomic Bomb Museum;
3). exchanges with junior high schools in Hiroshima and Tokyo; and
4). visits to parliamentarians and Ministry of Education, Culture, Sports, Science and Technology (MEXT).

In the fiscal year 2022, the training entitled "Peace and Resilience Building in Education from Educational Policies and Course Perspectives –The Experience from Japan" was carried out online in the form of 4 webinars withthe participation of 34 trainees from 9 African countries.

Peacebuilding Project for Sustainable Peace in East Asia
(Finance & General Affairs Division, General Affairs & Public Relations Group)

Financial and General Affairs Office, Department of General Affairs and Public Relations, General Affairs G

This project focuses on peacebuilding in East Asia by analyzing the region from multiple perspectives, including economic, political, military, cultural, and science and technology dimensions. Through these analyses, the project aims to examine current challenges, explore potential solutions, and identify priority areas and strategies for Japan from the viewpoints of effectiveness and efficiency, ultimately aiming to provide policy recommendations.

In FY2023, Hiroshima University launched the Peacebuilding Project "Peacebuilding Colloquium," forming a group of around a dozen experts, primarily from within Japan, to participate as colloquium members. During FY2023, each meeting featured lectures by leading experts on specific topics, fostering extensive discussions on East Asian peacebuilding from a comprehensive perspective. In FY2024, the colloquium held five sessions under the theme "Peacebuilding in East Asia through Education, cademia, and Culture," aiming for deeper and more focused discussions. Based on a total of 11 sessions over two years, the project compiled its findings into a set of policy recommendations.

Partnerships for the Goals

Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development.

Global Partnership in the Field of International Educational Cooperation

Center for the Study of International Cooperation in Education (CICE)

Publication of the Journal of International Cooperation in Education (JICE) – A peer-reviewed, open-access journal

CICE had published 24 volumes of The Journal of International Cooperation in Education (JICE) since its official launch in 1998. In March 2022, open access to JICE started. The journal is now a peer-reviewed, open-access journal published by Emerald Publishing in the UK on behalf of CICE, who owns the title. The main focus of this journal is on educational policies and institutions, and educational development practices in the Global South, as well as theoretical and methodological considerations and empirical research on them. With the aim of having contributions from diverse research presenters and paper contributors and providing researchers and educational development practitioners in developing countries as well as young researchers in and outside of Japan with a platform where they can have their papers published, CICE carries out regularly-held writers' workshops and other activities in writing support.

As the international reputation of JICE increases, CICE will further promote its activities that contribute to disseminating the knowledge and expertise in educational development, which have been accumulated in Japan and the Global South.

JICA Training "Education policy formulation and analytical ability development for improving learning"

Every year, as part of JICA's international cooperation program for human resource development and co-creation of knowledge, CICE designs and operates one-to-two months of training for educational administrators and university researchers from developing countries.

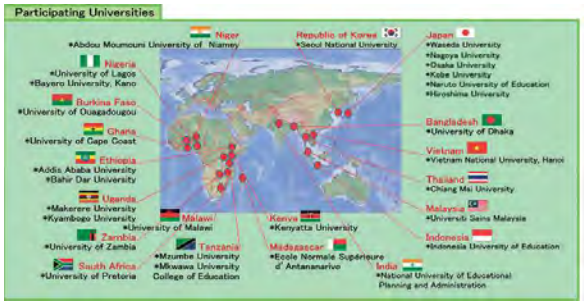
The training aims at building up their capacity to prepare, implement, monitor, and evaluate a project with a view to making improvements in formulating educational development plans and education policies, promoting access to education and improving the quality of education.

From 2018 to 2023, CICE provided JICA thematic training "Education policy formulation and analytical ability development for improving learning," to about 20 trainees every year from around a dozen countries in Africa and Asia such as South Africa, Kenya, Ethiopia, Ghana, Egypt, Cambodia, Thailand, and Afghanistan. Trainees, being aware of issues relevant to their own countries, could learn lessons from Japan's experience in education policy-making and implementation of policy measures. During the period when the COVID-19 pandemic was widespread, the training program included contents that were useful for addressing each country's needs such as the impacts of COVID-19 on each country and measures to address the pandemic. In 2024, it is expected that supplementary training will be carried out in Cambodia based on the results of the training to deepen mutual learning.

"Africa-Asia University Dialogue for Educational Development" (AA Dialogue) Network

The "Africa-Asia University Dialogue for Educational Development" (AA Dialogue) Network has been established to promote international collaborative research, which is related to educational development in developing countries, between universities in Africa and Asia. As the secretariat of AA Dialogue Network, CICE has provided a platform for collaborative research and has provided support for the strengthening of the ability to write English dissertations. Currently, 28 universities including South Africa, Kenya, Vietnam, Malaysia, and Indonesia participate in the AA Dialogue Network. It has conducted joint research on the impacts of COVID-19 on educational sites and children in each country and measures to address the pandemic. The outcome of the joint research has been published in international journals.

AA Dialogue also provides students at Hiroshima University with opportunities to engage in research on specific themes jointly with students from Malysia and Indonesia and to interact with those students.



Japan Education Forum for Sustainable Development Goals (JEF for SDGs)

For the purpose of exchanging opinions on the importance of autonomous educational development by developing countries themselves and the ideal way of international cooperation to support their self-help efforts, the Japan Education Forum for Sustainable Development Goals (JEF for SDGs) is held annually, co-sponsored by the Ministry of Education, Culture, Sports, Science and Technology,

the Ministry of Foreign Affairs, Hiroshima University, and the University of Tsukuba. CICE serves as the secretariat of this forum and has been involved in planning and management. The 17th Forum held online in 2021 on the theme of "Girls Education and Innovation", featured keynote speeches by the Secretary-General of the Ministry of National Education of Senegal and by Professor Emeritus Reiko Kuroda of the University of Tokyo, and a panel session on girls' education and innovation, followed by a lively exchange of opinions. In July 2023, the 18th Forum was held online on the theme of "Quality of Education and Learning Outcomes for Vulnerable Populations" in support of the G7 Toyama-Kanazawa Education Ministers' Meeting held in May 2023. The Forum considered issues which faced countries where people were deprived of education opportunities for various reasons such as armed conflicts and COVID-19 pandemic, and possible approaches to support such countries.

International Cooperation in the Asian and African Regions Aimed at Eliminating Hepatitis Viruses as a Goal of the SDGs

Project Research Center for Epidemiology and Prevention of viral hepatitis and hepatocellular carcinoma/Graduate School of Biomedical and Health Sciences

Executive Vice President/Specially Appointed Professor Junko Tanaka

Hepatitis Virus control is one of the SDGs (3.3) and is a crucial global issue. The World Health Organization(WHO) has set a goal to achieve elimination of Viral Hepatitis by 2030.

Project Research Center for Epidemiology and Prevention of viral hepatitis and hepatocellular carcinoma conducts epidemiological research on the long-term course of hepatitis virus infection and elimination, as well as grasping the status of hepatitis virus infection such as hepatitis C and hepatitis B in Japan. The center is conducting research to present basic materials that will be the scientific basis for policy planning, formulation of standards, and administrative measures. In addition to achieving the 2030 viral hepatitis elimination goal adopted by WHO, we are conducting research on the clarification of issues that differ in each municipality area and on measures according to the characteristics such as the actual treatment conditions in each region.

In Japan, efforts such as the prevention of mother-to-child transmission of hepatitis B virus (HBV), the introduction of blood screening for transfusions, and comprehensive measures focusing on 'testing, diagnosis, and treatment' have been promoted for hepatitis and liver cancer prevention. As a result, it is expected that the elimination goal set by the WHO for hepatitis C virus (HCV) by 2030 will be achieved, and the HBV infection rate among children under 5 years old has also been reduced to less than 0.05%.

On the other hand, it is estimated that there are approximately 300 million people worldwide with chronic HBV infections (carriers), and about 820,000 people die from HBV-related liver diseases each year (as of 2019). Asian and African countries have been high-endemic areas for HBV. At our center, in addition to conducting epidemiological research on viral hepatitis domestically, we also conduct epidemiological research in Cambodia, Vietnam, and Burkina Faso, aiming for international cooperation towards the elimination of viral hepatitis.

In 2017, a nationwide survey on the hepatitis virus infection status was conducted in Cambodia, covering the entire country (in collaboration with the Cambodian Ministry of Health, the University of Health Sciences in Cambodia, WHO, and the U.S. CDC). This effort demonstrated that Cambodia had achieved the WHO goal of reducing the HBV positivity rate among 5-year-old children to below 1%. However, it was revealed that the infection rate among the maternal population in the same country was high at 4.4%. Therefore, starting in 2019, in collaboration with the Cambodian Ministry of Health and WHO Cambodia, epidemiological surveys were conducted at three healthcare facilities in the northwestern region of Cambodia, specifically in Siem Reap Province. As a result of collecting and analyzing serum samples from 1,565 pregnant women and their newborns, it was found that the infection rate among pregnant women remained high at 4.3%. Among them, it became evident that 30% were high-risk pregnant women for HBV mother-to-child transmission, characterized by high viral loads. Vaccination was administered to all 35 newborns born to HBV-infected mothers as a preventive measure against HBV mother-to-child transmission. However, one of these infants was confirmed to be infected, raising suspicion of intrauterine transmission. Based on these results, it was recommended that Cambodia's HBV mother-to-child transmission prevention strategy should include the introduction of HBV screening for pregnant women and the administration of antiviral drugs to high-risk pregnant women (those with high viral loads).

Blood collection at the cooperating medical institutions in Cambodia

Since 2018, in Burkina Faso, located in West Africa south of the Sahara Desert, we have been collaborating with the Clinical Research Unit of Nanoro (CRUN) to generate evidence-based research through epidemiological studies. This collaboration has contributed to proposing effective strategies for preventing HBV mother-to-child transmission tailored to the specific conditions of the region. The results of the epidemiological surveys conducted thus far reveal that 6.5% of pregnant women in the country are infected with HBV, and among them, 20% have been identified as high-risk pregnant women for HBV mother-to-child transmission (high viral load). Furthermore, considering that the predominant strain in the country is HBV genotype E, it has been revealed for the first time that the use of the commonly used surrogate marker, HBe antigen, for identifying pregnant women in need of antiviral therapy results in many false judgments. Based on the insights obtained, it has been strongly recommended that the introduction of HBV screening for pregnant women in the country is urgently needed, and there is a demand for the implementation of a simple viral load assessment method as an alternative to HBe antigen. An analysis to determine whether the prevention of mother-to-child transmission has been achieved through antiviral treatment for pregnant women and vaccination for newborns is currently underway.

Project Research Center for Epidemiology and Prevention of viral hepatitis and hepatocellular carcinoma will continue epidemiological research on the long-term course of hepatitis virus infection and elimination, as well as grasping the status of hepatitis virus infection such as hepatitis C and hepatitis B, and will continue to work towards developing strategies to effectively prevent mother-to-child transmission of hepatitis B virus in the Asia and Africa regions, taking into account the diverse challenges that each region faces, including healthcare systems, economic conditions, and cultural backgrounds. We aim to have a clear understanding of these challenges and build comprehensive approaches.

At the cooperating medical institutions in Cambodia

Questionnaire and fingerstick blood collection
at the cooperating medical institutions in Burkina Faso

Partnerships for the Goals

Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development.

Support for the Introduction of Stereotactic Body Radiation Therapy (SBRT) at the National Cancer Center of Mongolia

Department of Radiation Oncology, Graduate School of Biomedical Sciences

Assistant Professor Nobuki Imano

Japan has led the world in the research, development, and clinical introduction of stereotactic body radiation therapy (SBRT) techniques for lung and liver cancer. This technique involves delivering concentrated radiation to tumors from multiple directions in three dimensions. Compared to conventional irradiation methods, SBRT minimizes the radiation dose to surrounding normal organs while enabling a high-dose pinpoint delivery to the tumor over a short period. This results in favorable treatment outcome and fewer side effects. To introduce this technology into Mongolia, a team from the Department of Radiation Oncology at Hiroshima University Hospital visited the Mongolian National Cancer Center to provide support. From June 17 to June 21, 2024, the team, consisting of two doctors, a medical physicist, and a technician, visited Mongolia, where they held lectures on SBRT, provided practical guidance in clinical settings, and collaborated with local staff to successfully initiate the first cases of liver and lung SBRT treatment in Mongolia.

Health Project in Indonesia

Graduate School of Biomedical and Health Sciences

Professor Michiko Moriyama

Development of a Primary Care-Level Health Cadre Training Program to Reduce Maternal Mortality in Indonesia

Maternal mortality in Indonesia remains high compared to other Southeast Asian countries. In Banjarnegara Regency, where this study was conducted, the ratio of pregnant women to midwives is far below the target set by the Indonesian Ministry of Health for 2025. Therefore, it is necessary to enhance the capacity of health cadres who support midwives in managing maternal health within the healthcare system.

To enable health cadres to perform their roles effectively, we developed a scenario-based training program to improve their clinical skills and tested its effectiveness at primary care centers. This program successfully enhanced their comprehensive abilities, including health assessment and communication skills. Currently, we are working to have this training program formally adopted at the regency level across Indonesia.

Building a Resilient Health System to Address Future Challenges through the Promotion of Healthcare and Education Through Strong Collaboration

Graduate School of Biomedical and Health Sciences

Associate Professor Mohammad Moshiur Rahman

mHealth Education for Sustainable Development in Rural Bangladesh

Anemia remains a major global public health challenge, particularly among adolescent girls in rural areas, with a reported prevalence of 37.7% in 2022. The main causes are a lack of knowledge and inadequate nutritional intake. Mobile health (mHealth) education offers a promising approach to addressing this issue.

This study was conducted collaboratively by Hiroshima University, North South University, and the International Centre for Diarrhoeal Disease Research, Bangladesh (icddr,b) to evaluate the impact of mHealth education on hemoglobin levels and anemia reduction among rural adolescent girls. The mHealth education program significantly improved participants' knowledge, attitudes, and practices (KAP) regarding anemia. It also contributed to improvements in key anthropometric indicators, including body mass index (BMI), mid-upper arm circumference, waist circumference, and hip circumference.

Furthermore, the intervention increased the recovery rate from anemia by 12.2% and showed a trend of rising hemoglobin levels. These results suggest that mHealth education is effective in improving KAP and nutritional status and represents a sustainable strategy for reducing anemia among adolescent girls in low-resource settings.

Partnerships for the Goals

Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development.

Building a Resilient Health System to Address Future Challenges through the Promotion of Healthcare and Education Through Strong Collaboration

Graduate School of Biomedical and Health Sciences

Associate Professor Mohammad Moshiur Rahman

International Conference: Healthcare, SDGs, and Social Business

The 7th International Conference, "Social Tech Summit 2025: Healthcare, SDGs, and Social Business," was held from October 2–4, 2025, at the Kasumi Campus of Hiroshima University (Japan). This international conference brought together researchers, practitioners, and policymakers from both developed and developing countries to collaborate on addressing global challenges through social innovation and technology.

The summit focused on how healthcare innovations can be effectively scaled and sustained through social business models, emphasizing alignment with the Sustainable Development Goals (SDGs) while maximizing global impact. This year's theme, "Innovating Healthcare, Empowering Humanity," reflected a shared commitment to envisioning a future of inclusive, equitable, and sustainable healthcare.

Over the three-day program, participants engaged in keynote speeches, thematic sessions, case study presentations, panel discussions, and a Youth Innovation Forum. Key focus areas included digital health technologies, resilience to climate change and disasters, smart healthcare systems, and social entrepreneurship for achieving the SDGs. A total of 368 participants (209 in-person, 159 online) from 23 countries attended, exchanging knowledge, sharing best practices, and discussing practical strategies to create inclusive and sustainable social impact.

Through this summit, Hiroshima University strengthened partnerships across academia, industry, and society, advancing its mission to build a smarter and more resilient global community.

Hosting Training Programs for Young Overseas Dentists

Graduate School of Medical Sciences, Pediatric Dentistry

Assistant Professor Yuko Iwamoto

We have been continuously hosting young dentists, primarily specializing in pediatric dentistry, from dental schools in Southeast Asia and other countries. The program goes beyond merely observing clinical and research laboratories; participants also join pediatric dentistry-led outreach events and are introduced to examples of initiatives in social welfare administration, creating a program that can contribute to social welfare in their respective countries.

In addition, academic collaboration and exchange continue through research on oral bacteria. In the 2024 academic year, we hosted a two-week training program for fourth-year dental students from the University of Sheffield Faculty of Dentistry in England.

Activities of the Positive Peace Society

Japan's First Student-Led Positive Peace Society Pioneers an Interdisciplinary Approach to Peace and Sustainability

At Hiroshima University, a groundbreaking student initiative has begun to take shape in the fields of peacebuilding and sustainability. The Positive Peace Society (PPS) is Japan's first student organization based on the principles of Positive Peace, and it is building an interdisciplinary approach that bridges peace and sustainability through collaboration with industry.

Creating a Harmonious and Peaceful Future Through Industry Collaboration

In August 2024, PPS students and faculty members from NERPS participated in a collaborative program with Micron Memory Japan (Micron Japan). The visit was organized under the theme "Peace Through Technology" in cooperation with Micron's Employee Resource Group (ERG), Micron Mosaic. The program was led by PPS Founder Vrajesh Rawal, with academic support provided by Associate Professor Dahlia Simangan.

As part of the program, participants toured Micron's "FAB15" cleanroom facility and observed firsthand the highly precise manufacturing processes that support semiconductor and artificial intelligence (AI) technologies. Kazuhiro Nomura, Director of the Advanced Technology Japan division at Micron Japan, provided practical insights into the semiconductor industry and introduced the company's policy of positioning Diversity, Equity, and Inclusion (DEI) at the core of corporate innovation. The visit highlighted the potential for advanced technologies to contribute to building a more harmonious and peaceful society when combined with ethical and inclusive practices. Participants explored the intersection of artificial intelligence, technological innovation, corporate social responsibility, and peacebuilding, reaffirming the importance of linking technological fields with the social sciences to address today's complex global challenges.

Innovation at the Intersection of Peace and Sustainability

In September 2024, PPS exhibited at Hiroshima University Startup Demo Day 2024 and presented a project titled "Peace Index for Local Companies." This student-led initiative was spearheaded by PPS founder Vrajesh Rawal. The project utilizes blockchain technology and data analytics to develop a framework for evaluating the extent to which companies in Hiroshima Prefecture contribute to peace.

This ongoing project aligns with key pillars of Positive Peace research, such as well-functioning government, low levels of corruption, sound business environments, and high levels of human capital. It introduces an interdisciplinary approach that integrates corporate social responsibility (CSR) reporting with blockchain technology.

The project received high recognition for its social significance and innovation and was awarded the "Deloitte Prize" by Deloitte Tohmatsu Consulting. As Japan's first "Peace Index" designed to measure corporate contributions to peace, the initiative positions responsible business practices as a foundation for sustainable peace.

Peace Promotion Project Team, Hiroshima Prefecture

Director of Peace Promotion Project Team, Hiroshima Prefecture
Mariko Nishizawa

In this year marking the 80th anniversary of the atomic bombing, Hiroshima Prefecture and the Hiroshima Organization for Peacebuilding (HOPe) have undertaken initiatives to deliver impactful peace messages from Hiroshima under the themes: "A Project Where World Leaders Gather to Discuss the Future and Peace," and "A Project Where Young People Gather to Pass Peace on to the Future."
Under "A Project Where World Leaders Gather to Discuss the Future and Peace," we held the "2025 Hiroshima International Peace & Business Forum" in May. At the forum, we introduced and communicated to the world a new concept—ESGP—which adds "P" for Peace to ESG (Environment, Social, and Governance). ESGP serves as a guiding principle encouraging diverse stakeholders to take concrete action toward contributing to peace through business.
In November, together with Hiroshima University, we hosted the Pugwash Conference World Congress, bringing together scientists from around the world who are committed to the abolition of nuclear weapons. Through this gathering, we actively disseminated messages advocating for nuclear disarmament to the global community. Next, under "A Project Where Young People Gather to Pass Peace on to the Future," we collaborated with Hiroshima University to support the development of specialized career paths that enable university students from Hiroshima and beyond to play active roles in the international community. In addition, we promoted initiatives such as the "Origami Crane Campaign" at the Osaka–Kansai Expo, encouraging many young people to deepen their interest in peace. For HOPe, which is working toward positioning nuclear disarmament within the next United Nations development goals, the activities of NERPs advancing transdisciplinary research on peace and sustainability in collaboration with diverse actors offer significant insights and are of great importance.
The Hiroshima Organization for Peacebuilding became a general incorporated association in December 2025. Taking this opportunity, and in collaboration with Hiroshima University, we aim to further strengthen our initiatives toward international peace and contribute to the achievement of the SDGs.

Columbia University in the City of New York

Director of the Center for Sustainable Development and University Professor at Columbia University in the City of New York
Jeffrey D. Sachs

The Network for Education and Research on Peace and Sustainability (NERPS) is a very inspiring and noble initiative as the Hiroshima University's most important efforts to contribute to the SDGs. I am absolutely honored to be the keynote speaker of its first conference in March 2022 and its webinar series that started in September 2020, when we commemorated the 75th anniversary of the Hiroshima and Nagasaki bombings. Currently, we are witnessing the failure of global cooperation in addressing the Russia-Ukraine war, the COVID-19 pandemic, and climate change, among other pressing issues. These are the most critical challenges on the planet, and how fitting that Hiroshima University leads this global effort on the peace-sustainability nexus. I am very inspired by your undertaking of this effort, and I commit to continue working with you to find pathways to peace and sustainability.

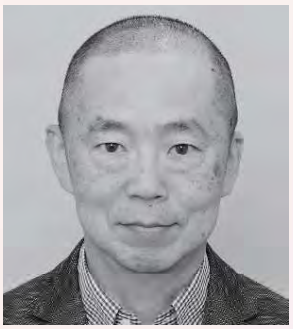
Higashihiroshima City

Mayor of Higashihiroshima City
Hironori Takagaki

Community Co-Creation through the "Town & Gown Office"

In the Fifth Higashihiroshima City Comprehensive Plan, which serves as the basic policy for city development toward 2030, Higashihiroshima has set forth its future vision as an "International Academic Research City Rich in Nature, Challenging the Future." At the core of this vision lies the SDGs principle of "leaving no one behind." To realize this future vision, we believe it is essential to build a "Smart City" that addresses the social challenges identified in the SDGs by utilizing the technologies and advanced innovations proposed under Society 5.0.
To this end, in October 2021, the City of Higashihiroshima and Hiroshima University jointly established the "Town & Gown Office." In March 2022, we also launched the "Hiroshima University Smart City Co-Creation Consortium," a collaboration among industry, academia, and government, and have since been advancing community development under the "Next-Generation Academic City Concept." The city development initiative undertaken by Higashihiroshima aims to become a "Next-Generation Academic City" with a "local hub" function leveraging its concentration of intellectual resources and international companies to connect directly with domestic and overseas enterprises without relying on major metropolitan centers. Through this initiative, we seek to realize the goals of the SDGs, enhance well-being, and promote positive peace.
In March 2025, we designated the area surrounding Hiroshima University and the Yoshikawa area, where semiconductor industries are concentrated, as the "Next-Generation Academic City Zone." Centered on this zone, we are working to foster innovation and build a sustainable and growing city that attracts entrepreneurs and researchers from around the world. We look forward to Hiroshima University fully utilizing its strengths in research and development and playing a leading and central role in advancing this city development initiative.

Sumitomo Corporation



President of Sumitomo Corporation
Chugoku Branch
Junya Yamanishi

Sumitomo Corporation has been working together with Hiroshima University, which has set the ambitious goal of achieving "carbon neutrality by 2030" a target 20 years ahead of the government's plan and Higashihiroshima-City, which is implementing SDGs Future City initiatives, since January 2021. We have now entered the 5th year of this partnership, and we would like to express our sincere gratitude.
Our company is committed to solving the challenges faced by society, local communities, and universities together with all of you. Our aim is to create a city that is liveable for people of all generations, genders, and nationalities, a city that continuously utilizes and updates the latest technologies, and a city full of vitality driven by innovation and collaboration between universities and local governments.
To achieve this, we will continue efforts such as introducing renewable energy, deploying electric vehicles (EVs), and utilizing charging and discharging equipment for energy management. We are also working on ideas to integrate private and public services into a unified platform, which will involve building a data coordination infrastructure. By engaging in continuous discussions to improve these efforts, we aim to create an environment in which research, demonstration, and social implementation can take place in collaboration with Hiroshima University and Higashihiroshima-City.
Additionally, we plan to contribute to the semiconductor industry, which is experiencing significant investment driven by the G7 Hiroshima Summit held two years ago. This momentum is promoting the gathering of related industries in the Higashihiroshima-City region, and we will also contribute to the training of semiconductor talent led by Hiroshima University.

Indonesia

Former Head, National Research and Innovation Agency (BRIN)
Indonesia
Hiroshima University Alumni Association Indonesia (HUAA Indonesia) Co-President
Laksana Tri Handoko

As one of the alumni of Hiroshima University, I am very excited to see that the University is leading the world in its social contribution to the SDGs. I admire the fact that Hiroshima University is not only a comprehensive research university that engages in excellent academic research in science and technology innovation, but also plays an important and continuous social role for world peace and human happiness for a long time. As the head of BRIN, the science and technology innovation arm of the Indonesian government, I would like to also contribute to the SDGs in collaboration with Hiroshima University in various ways.

NERPS

Network for Education and Research on Peace and Sustainability (NERPS), Hiroshima University

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