

News Letter

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The Hitachi Global Foundation publishes news letters featuring its many activities. We offer various types of news about our Foundation, ranging from activity reports on symposiums, seminars, awards ceremonies, and other events to our latest topics. Please take a look to find out more.

Realization of an Inclusive Society

E-Journal

The Hitachi Global Foundation Global Society Review Vol. 3

The e-journal "Global Society Review" serves as a platform for experts in academic fields related to inclusion to organically interact and share their expertise with one another, thereby contributing to new academic ideas and perspectives.

The third issue, published in December 2024 with the theme "Art × Inclusivity," takes a look at inclusivity through the lens of art and covers a variety of perspectives, including a documentary film screening with director Q&A, a play, a paper, an essay, and an interview.

Preface - From Editor-in-Chief Korekawa

The works in this issue are all multi-layered in their composition, including the way in which the audience perceives them, while also taking a self-aware and skeptical view of the relationship between the creator and the work, but in their treatment of the issue of Art × Inclusivity, they very much distill what stands at the heart of the matter. This characteristic also aligns with the purpose and character of the Global Society Review. In that sense, the journal itself is an attempt at "Art × Inclusivity," and thus can be considered a piece of such work.



Preface	Art × Inclusivity
Cover Story	Documentary Film Screening with Director Q&A "Journey to be continued"
Play	Family Restaurant, Glass, Izakaya and Dilemma
Interview	Art × Inclusivity/Decorative Art supporting Isolation and Poverty
Conversation Interview	Life as an Immigrant Rapper Moment Joon talks about representation and perception in Japan
Essay	The Truth That Kindness Cannot Hide: Rereading "Diary of an Immigrant to Japan"
Paper	Art and Inclusive Society
Serial	"What Statistics Tell Us About Immigrant Society (3)"
Editorial Postscript	

Currently available in Japanese only ▶



Cover Story Documentary Film Screening and Director's Q&A "Journey to be continued"

The film was produced in 2016 by the Kani International Exchange Association, a non-profit organization in Gifu Prefecture, and shows young people with foreign roots who are trying to enter high school. At the screening, director Shigeaki Iwai was invited to hold a Q&A about the production process, the intentions behind the film, and its development. He exchanged ideas with the 61 people gathered in the audience.



Hitachi Future Innovator Program FY2024 On-site Lessons

The Hitachi Global Foundation has developed the Hitachi Future Innovator Program, a project-based learning program for fifth graders to foster the abilities to find and solve problems required of future human resources in science and technology. We have been collaborating with Hitachi Group companies to provide on-site lessons since 2016. In FY2024, the program was implemented in five schools: Takada Elementary School in Bungotakada City (Oita Prefecture), Nakamachi Elementary School in Hitachi City (Ibaraki Prefecture), Hikarigaoka Elementary School in Kashiwa City (Chiba Prefecture), Saginuma Elementary School in Narashino City (Chiba Prefecture), and Uehara Elementary School in Shibuya Ward (Tokyo).

Ideal School Imagined by the Children



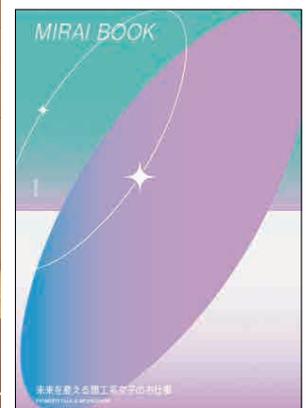
Girls in Science Support Project

Pioneer Talks and Workshop event report now available

The event report for the Pioneer Talks and Workshop titled "Women in Energy - the Need and the Opportunity," held at Tokyo Institute of Technology (now Institute of Science Tokyo) on Saturday, July 20, 2024, is now available on the Hitachi Global Foundation website. Please take a look to find out more.



▲ Available in Japanese only



The Hitachi Global Foundation Asia Innovation Award FY2024 Award Recipients Announced

The Hitachi Global Foundation Asia Innovation Award is an award program launched in 2020 to promote science, technology, and innovation that contribute to solving social issues and realizing a sustainable society in the ASEAN region. This award recognizes individuals and groups that have notably served the public interest through their outstanding research and development projects that envision an ideal society and incorporate plans to implement innovative science and technology with the aim of contributing to the United Nations Sustainable Development Goals (SDGs).

In the fiscal year of 2024, we solicited research and R&D achievements from 26 universities and research institutions in 6 ASEAN countries (Cambodia, Indonesia, Laos, Myanmar, Philippines, and Vietnam) contributing to each of selected targets of Goal 12 (Responsible Consumption and Production) and Goal 13 (Climate Action).



Goal 12 "Responsible Consumption and Production"

Targets 12.2 Achieve the sustainable management and efficient use of natural resources, 12.3 Reduce food losses along production and supply chains, 12.4 Significantly reduce emissions of chemicals and all wastes to air, water and soil, 12.5 Substantially reduce waste generation through prevention, reduction, recycling and reuse, 12.8 Sustainable development and lifestyles in harmony with nature, 12.a Strengthen scientific and technological capacity



Goal 13 "Climate Action"

Targets 13.1 Strengthen resilience and adaptive capacity, 13.2 Integrate climate change measures into national policies, strategies and planning, 13.3 Improve education, awareness-raising and human and institutional capacity, 13.b Focus on women, youth and local and marginalized communities

We received applications from eligible universities and research institutions by recommendation, and the 14 recipients were selected in a rigorous screening process. You can view the award recipients and research summaries on our website.

<https://www.hitachi-zaidan.org/global/topics/topics014.html>



Best Innovation Award 3 million yen

"Zero Waste Process of Brown Seaweed for Environmentally Friendly Aquaculture Disease Control and Bio Fertilizer Production"

Country **Indonesia** Affiliation **Gadjah Mada University** Name **Dr. Alim Isnansetyo**

This awardee has developed a technology centered on the use of brown seaweed, *Sargassum* sp. as an immunostimulant and vaccine in the aquaculture industry, as well as the use of *Sargassum* sp. byproduct in producing agricultural bio-fertilizer. Zero-waste production systems for immunostimulants, vaccines, and biofertilizers contribute significantly to sustainable aquaculture and agriculture for improving productivity.



12.2 12.4 12.5
12.8 12.a



Outstanding Innovation Award 1 million yen

"Synthesis of Nanomaterials from Biomass for Applications in Furfural Production and Wastewater Treatment"



12.4 12.5

Country **Vietnam**
Affiliation **Ho Chi Minh City University of Technology**



Name **Dr. Hieu Huu Nguyen**

This awardee has conducted research and development on the synthesis of furfural (a basic chemical product), graphene, and aerogel by extracting cellulose and hemicellulose from biomass such as corn, bagasse, and coconut.



Outstanding Innovation Award 1 million yen

"Geopolymers and Alkali-Activated Materials as Eco-Innovative Composite Products"



12.2 12.4 12.5 12.a

Country **Philippines**
Affiliation **De La Salle University**



Name **Dr. Michael Angelo Baliwag Promentilla**

This awardee has used coal-fly ash and nickel laterite mine waste to develop innovative geopolymer technology and environmentally friendly alkali-active materials.



Outstanding Innovation Award 1 million yen

"Research and Development of Pharmaceutical Products Derived from Vietnamese Endemic Medicinal Plants"



12.2 12.4 12.5 12.8 12.a

Country **Vietnam**
Affiliation **Hue University**



Name **Dr. Nhung Ai Thi Nguyen**

This awardee identified active ingredients in medicinal herbs from Thua Thien Hue Province and used environmentally friendly extraction techniques and simulation methods to develop pharmaceutical products such as essential oils, herbal teas, and medicinal mushrooms.



Outstanding Innovation Award 1 million yen

"Production of Mycoprotein Utilizing Byproducts from the Tempeh Industry"



12.2 12.4 12.5

Country **Indonesia**
Affiliation **Gadjah Mada University**



Name **Dr. Rachma Wikandari**

This awardee has successfully cultured and produced mycoprotein from soybean boiling water, a byproduct of the tempeh industry, resulting in a nutrient-rich product with high protein, high fiber content, low fat, and all essential amino acids.



Encouragement Award 500,000 yen

"Development of Highly Active Gold Catalysts and Biomass-based Nanocomposites Using Mechano-chemistry and Surface Approaches (MCS)"



12.2 12.3
12.4 12.5
12.8 12.a

Country **Vietnam** Affiliation **Hanoi University of Science and Technology**
Name **Dr. Dien Xuan Luong**

"Promoting Climate Resilience through Improving the Weather Predictability in Indonesia Using Ensemble Forecast"



13.1

Country **Indonesia** Affiliation **Sepuluh Nopember Institute of Technology**
Name **Dr. Heri Kuswanto**

"Development of Versatile Biofunctionalized Biomedical Materials for Infection Control and Immune Modulation"



13.1
13.3

Country **Indonesia** Affiliation **Gadjah Mada University**
Name **Dr. Ika Dewi Ana**

"Understanding Philippine Lakes' Contribution to Global Methane Budget"



13.1 13.2
13.3 13.b

Country **Philippines** Affiliation **Ateneo de Manila University**
Name **Dr. Milette Mendoza Pascual**

"Management of Pig Manure Pollution Effect to Environment and Climate Change at Luangprabang Province, Lao PDR"



13.1 13.2
13.b

Country **Laos** Affiliation **Souphanouvong University** Name **Dr. Noupone Manivanh**

"Eco-strategies for Rice-fish Cultivation Sustainability"



12.4 12.5
12.8 12.a

Country **Vietnam** Affiliation **Ton Duc Thang University** Name **Dr. Phuong Nguyen Xuan Vo**

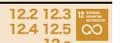
"Conversion of Paper Waste Sludge into Bacterial Nanocellulose for Sustainable Paper Production"



12.2 12.3
12.5

Country **Vietnam** Affiliation **Ho Chi Minh City University of Technology**
Name **Dr. Quan Dinh Nguyen**

"Cambodian Soybean Innovation through Value Addition of Soybean Meal and Soybean Residues"



12.2 12.3
12.4 12.5
12.a

Country **Cambodia** Affiliation **Institute of Technology of Cambodia** Name **Dr. Reasmey Tan**

"Development of Health Benefit and Sustainable Plant-based Products from Vietnamese Agriculture Crops"



12.2 12.5
12.a

Country **Vietnam** Affiliation **Hanoi University of Science and Technology** Name **Dr. Trang Thu Vu**

The Hitachi Global Foundation Science and Technology Seminars

"What is Fatigue? – Viruses know everything about it"

The 20th Hitachi Global Foundation Science and Technology Seminar was held on Saturday, November 30.

This event was held online (Zoom webinar) and was attended by a large audience of 550 attendees.

The theme was "fatigue." Professor Kazuhiro Kondo (Specially Appointed Professor, Department of Fatigue Science, The Jikei University School of Medicine), a leading researcher in fatigue science, was invited to speak at the event.

Professor Kondo has been recognized for numerous achievements, such as elucidating the mechanism of latent infection and reactivation of human herpesvirus 6 (HHV-6), elucidating the mechanism of physiological fatigue, discovering the SITH-1 gene associated with depression, and investigating the causes of long COVID. He has also published a book with the same title as this seminar. Additionally, he also provides information to the general public through the website "Cartoon Guide: The Latest on Fatigue and Stress!", which uses a comic format to give easy-to-understand explanations of topics like fatigue, depression, and stress.



Cartoon Guide
The Latest on Fatigue and Stress!

<https://jikeivirus.jp/hiroukouza/>

Are depression and long COVID related to fatigue and viruses?!

Why do people get tired? – the world's leading-edge studies on fatigue

Though many people are familiar with fatigue, a significant phenomenon that is also the cause of many illnesses, its mechanisms have been poorly understood. In Japan, where customary greetings reference tiredness ("otsukaresama") and death from overwork (karoshi) has become a recognized social issue, interest in fatigue is relatively higher than in western countries. Consequently, research into the science of fatigue has been making significant progress in Japan. We received more than 150 preliminary questions submitted before the event.

During the seminar, Professor Kondo began by introducing the six key points listed below. Following this structure, he explained the physiological mechanisms of fatigue in an easy-to-understand manner, while incorporating answers to questions from the audience.

- 1 Classification of fatigue (physiological and pathological fatigue)
- 2 Mechanisms of physiological fatigue (causes and recovery)
- 3 Classic examples of pathological fatigue and the pathogenic mechanism of depression
- 4 Methods for treatment and prevention of pathological fatigue learned from long COVID
- 5 The differences between those who are prone to depression and those who are not
- 6 Fatigue issues that can hopefully be resolved in the near future

We received numerous insightful comments. Here are some highlights: "I learned that viruses are involved with fatigue." "It was a new discovery for me to learn that fatigue and the feeling of tiredness are different things." "I was surprised to learn about the connection between long COVID research and studies on fatigue and depression."



The Hitachi Global Foundation Science and Technology Seminars, covering themes drawn from the latest science and technology topics, are held once a year with the aim to have the general public experience the excitement of science and understand the importance of seeing things through the eyes of science. Please visit the website for more on past topics and event reports.

<https://www.hitachi-zaidan.org/global/activities/seminar/index.html>

