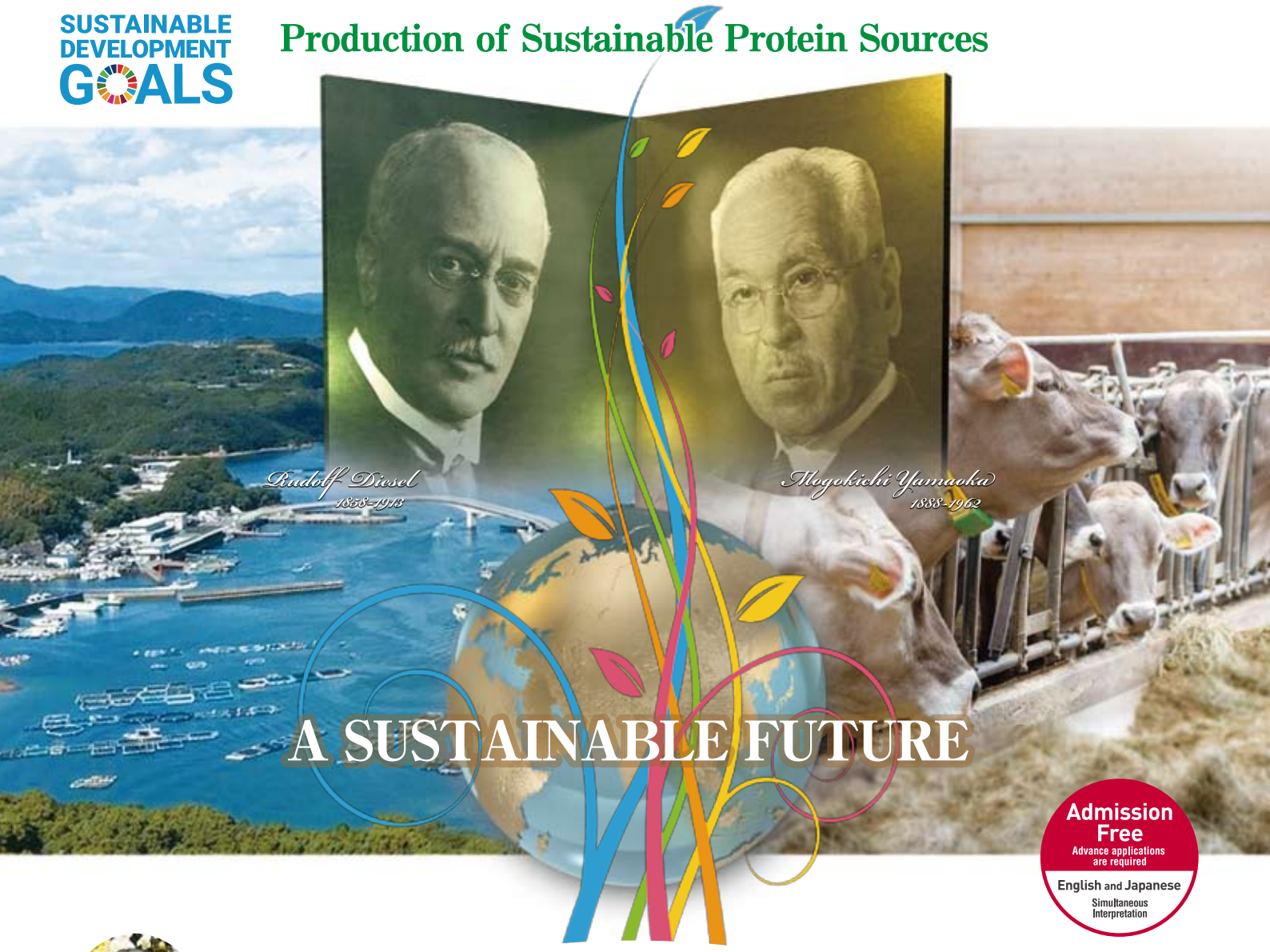
The 6th Yamaoka Memorial Foundation

Science & Technology Lecture

Food and Agriculture for a Sustainable Society

SUSTAINABLE DEVELOPMENT GOALS

Production of Sustainable Protein Sources



Admission Free
Advance applications are required
English and Japanese Simultaneous Interpretation

Can Aquaculture Save the World?

Ikuo Hirono, Ph.D.

Tokyo University of Marine Science and Technology, Professor

Opportunities through sustainability for dairy farms

Prof.Dr. Heinz Bernhardt

Technical University of Munich
Agricultural System Engineering

April 27th, 2023

16:00-19:00 Capacity ▶Venue: 100 seats ▶Online: 500 seats

● International Science Innovation Building, Kyoto University Yoshida Campus

Online lecture (ZOOM) will be held at the same time.

Registration

Please entry at website bellow.
https://yamaoka-memorial.or.jp/en/event/2023/0427-01.html

Entry deadline: 12:00 on April 26,2023

Organized by Yamaoka Memorial Foundation
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Co-Sponsored by 京都大学 KYOTO UNIVERSITY / 京都大学 農学研究科・農学部 農学部は2023年に100周年を迎えます。 / KURA 京都大学学術研究展開センター(KURA)

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Purpose of the Lecture Meeting

This Science and Technology Lecture focused on “Renewable Energy” , a theme closely related to prevention of global warming, one of the 17 Sustainable Development Goals (SDGs) adopted by the United Nations in September 2015, Under the theme of, we invited lecturers from Japan and Germany three times.
Since last fiscal year, lectures have been given three times in series on “Food” and “Agriculture” , which are also important issues as SDGs. The theme of this year as the 3rd time will be "Production of Sustainable Protein Sources". After keynote speeches held by experts from Japan and Germany, we expect active exchange of opinions will be made on a global theme of sustainable food and agriculture through panel discussions and exchange meetings mainly among young people who will lead the next generation.

Speaker Introduction

Ikuo Hirono, Ph. D.

Tokyo University of Marine Science and Technology, Professor

Since 2009	Professor
2004-2009	Associate Professor (due to the change of university name) Laboratory of Genome Science Graduate School of Marine Science and Technology Tokyo University of Marine Science and Technology
2002-2004	Associate Professor Laboratory of Genetics and Biochemistry Course of Aquatic Bioscience Graduate School of Fisheries Science Tokyo University of Fisheries
1998	Overseas Research Scholars of Ministry of Education, Science, Sports and Culture of Japan Host Professor Dennis A. Powers, Hopkins Marine Station, Stanford University
1994-2002	Assistant Professor Laboratory of Genetics and Biochemistry Course of Aquatic Bioscience Graduate School of Fisheries Science Tokyo University of Fisheries
1993-1994	Postdoctoral Fellowship (JSPS), Laboratory of Genetics and Biochemistry, Tokyo University of Fisheries

〈Awards received〉

1998 Achievement Award for Young Scientists in Fisheries Science of the Japanese Fisheries Science Society
2005 Best Paper Published in Marine Biotechnology
2008 Achievement Award for Young Scientists of Japanese Society of Fish Pathology
2020 Japanese Society for Marine Biotechnology Award

〈Abstract〉

Can Aquaculture Save the World?

As the world's population grows, food security is increasingly being discussed. Since the population will nearly double by 2050 compared to around 2000, food will be needed at least twice as much. Furthermore, considering the economic development of developing countries, it is estimated that about four times as much food will be needed until 2050. Producing four times as much food is not easy due to the water shortage problem, global warming gases, and energy balance (feed efficiency) in food production. Recently, aquaculture has been attracting attention around the world. In this lecture, I would like to present the topic "Can Aquaculture Save the World?

Prof. Dr. Heinz Bernhardt

Technical University of Munich
Chair of Agricultural System Engineering

Since 2015	Guest lectureship: Universität für Bodenkultur Wien/Austria, Tokyo University of Agriculture and Technology Tokyo/Japan, Hokkaido University Sapporo/Japan
2008-	Full professor for Agricultural System Engineering at – Technical University of Munich
2006-2008	Assistant Professor/Lecturer for Agricultural Engineering at the Justus-Liebig University Giessen
2005	Lectureship for Agricultural Engineering at the Christian-Albrecht-University Kiel
2002-2006	Postdoctoral research fellow at the Institute for Agricultural Engineering, Justus-Liebig University Giessen
1998-2002	Scientific assistant at the Institute for Agricultural Engineering, Justus-Liebig University Giessen
1997-1998	Research project „Logistic of sugar beets“

〈Awards received〉

12/2020 High Merit Award - CIGR International Commission of Agricultural and Biosystems Engineering

〈Abstract〉

Opportunities through sustainability for dairy farms

Dairy farms are the subject of much social debate in Europe with regard to sustainability. They are accused of contributing to global warming through their water consumption and emissions of the greenhouse gases carbon dioxide and methane. However, often only parts of the production process are considered. A closer look reveals a great potential for dairy farms through sustainability. Through their digestion, cows are able to convert organic material that humans cannot use directly into milk and meat. There are many additional possibilities in the areas of agricultural technology, crop production and animal nutrition. But cow stalls also offer opportunities in the field of sustainable energy production. Biogas, photovoltaics, geothermal energy and wind can be used to generate additional energy without affecting production in the barn. In some cases, there are also positive effects on milk production. Thus, the farm can serve as an energy producer in rural areas and stabilise regional energy grids. Building on this, there are other possibilities such as restarting energy systems after a blackout of the energy systems or disaster protection.

About "Yamaoka Memorial Foundation"

Magokichi Yamaoka, founder of Yanmar Group, succeeded in developing world’ s first compact diesel engine, which originates from ones invented by Dr. Rudolph Diesel in Germany,and hence spread this type of engines all over the world. With this background, the Yanmar Group has always been grateful for German technology and culture since it was founded. With such feelings of gratitude, Yamaoka Memorial Foundation was established to promote cultural exchanges between Germany and Japan in order to contribute to the sustainable development of our society.

Access

JR Kyoto Station → Yoshida Campus

City Bus: About 30 min(No.206)
Get off at “Kyodai Seimon-mae”

Taxi: About 20 min.

Bound for Kitaoji Bus Terminal via Hihashiyama Street