



HOKKAIDO UNIVERSITY

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1. Overview of Sustainability Weeks 2010

Features of This Year

- Theme : **Toward a Society Offering Quality of Life and Human Dignity for All**
- Core period : Mon, October 25 – Sun, November 7, 2010
- Number of events : 47
- Event period : Mon, September 25 – Wed, December 8, 2010
- Number of participants : 11,196
- Points worth special mention :
 - In a departure from the previous focus on natural environment topics, the SW 2010 program highlighted humanity for the first time. Consequently, the SW program developed into a Hokkaido University signature event covering an even broader range of academic fields and a greater diversity of issues than in previous years. It became unparalleled anywhere in the world as a program promoting social contributions and international exchanges.
 - During the SW 2010 Opening Ceremony held on October 25, a special event was held in honor of Hokkaido University Emeritus Professor Akira Suzuki, who was awarded the 2010 Nobel Prize in Chemistry several weeks earlier. The faculty, administrative staff and students of the University joined in the celebration of Dr. Suzuki's achievement.
 - Representatives of universities with which Hokkaido University newly concluded partnership agreements were invited to various SW 2010 events to share sustainability initiatives taken at their individual institutions. This helped to promote an understanding of the partner institutions among the faculty, administrative staff and students of the University.
 - The total numbers of events and participants in SW over the last four years, including this year, topped 100 and 20,000, respectively.
 - Hokkaido University and The Hokkaido Shimbun Press cohosted the Hokkaido University Sustainability Forum 2010 for the general public. The Hokkaido Shimbun serially published advertisements for the Sustainability Weeks and also carried an article publicizing the special event in honor of Emeritus Professor Akira Suzuki.
 - Students from the Graduate School of Environmental Science operated Velotaxi cycle rickshaws on campus during the Ride and Think for Sustainability in Hokkaido University event. Advertisements for the

Sustainability Weeks were placed on Velotaxis to facilitate fund-raising and publicity.

Hokkaido University Sustainability Weeks 2010..... From October 25(Mon.)



For our well-being
Toward a Sustainable Society



HOKKAIDO UNIVERSITY

Message from the President

Since its foundation as Sapporo Agricultural College in 1876, Hokkaido University (HU) has contributed to the creation of a society in which people live in harmony with nature. Since the beginning of the 21st century, we have broadened our outlook and set the goal of achieving a sustainable society through research and education in pursuit of relationships involving harmony among the environment, society, the economy, and individuals.

In 2008, we hosted the G8 University Summit in Sapporo and adopted the Sapporo Sustainability Declaration with 20 overseas universities, 14 Japanese institutions, and the United Nations University and pledged to act as a driving force behind the realization of such a sustainable society.

We will host the Sustainability Weeks again this year to reconfirm our commitment.

The theme of this year's Weeks – the fourth in the series – is **Toward a Society Offering Quality of Life and Human Dignity for All**. Come join in the symposiums, lectures, workshops, and exhibitions we have planned and engage in discourse with researchers from around the world as well as with students and members of the general public so we can all work together for the sake of a better future.



Saeki Hiroshi
President of Hokkaido University

1 Opening Event: Hokkaido University International Symposium on Sustainable Development

October 25 (Mon.)~ 26 (Tue.) 9:00 ~

Toward a Society Offering Quality of Life and Human Dignity for All –Comprehensive Exploration Into the Causes of the Crises We Face –



a Ideally a sustainable society allows everyone to achieve physical, mental, and social well-being to have a high quality of life. As these things are realized, those benefiting in turn become a driving force behind the sustainability movement and bring it closer to an ideal state.

In reality, however, human activity driven by self-interest and desire has caused rapid deterioration of the natural environment, including global warming, pollution stemming from hazardous chemicals, and reduced biodiversity. Meanwhile, social imbalances such as poverty and isolation have spread noticeably. It is thought that these problems will ultimately lead to the destruction of general well-being and threaten the very survival of humankind.

This symposium will investigate the deterioration of well-being from a comprehensive viewpoint and identify the inherent factors that destroy sustainability. It will also include consideration of how to remove factors that act as obstacles to the creation of a society in which everyone can enjoy a higher quality of life with dignity.

b Hokkaido University Conference Hall

c Japanese/English (Translation will be provided at the Plenary Session)

d Required (Charge:free)

e Hokkaido University

f Secretariat for Sustainability Weeks

TEL:+81-(0)11-706-2093

FAX:+81-(0)11-706-2095

E-mail: office1@sustain.hokudai.ac.jp



プログラム

October 25(Mon.)

● Opening Ceremony

Keynote Lecture: Keith F. TAYLOR, Dalhousie University

● Plenary Session

● Session1: Effects of the Natural & Social Environments on Human Health

Yun-Chul HONG, Institute of Environmental Medicine, Seoul National University
Reiko KISHI, Center for Environmental and Health Sciences, HU

● Session2: The Deterioration of Ecosystems and its Impacts on Human Life

Jamsran TSOGTBAATAR, Institute of Geoecology, Mongolian Academy of Sciences
Noboru FUJITA, Research Institute for Human and Nature
Mamoru ISHIKAWA, Faculty of Environmental Earth Science, HU

● Session3: Reflections on Societal Structure

Makoto YUASA, Anti-poverty Network
Takeshi NAKAJIMA, Faculty of Public Policy, HU

October 26(Tue.)

● Parallel Sessions

1. Children for Sustainable Development–Present Crisis Affecting Children

● Host: Faculty of Education ● Language: Japanese

2. The Eurasian Ecotone: Sustainable Ecosystem Use in Mongolia

● Host: Faculty of Environmental Earth Science GCOE ● Language: English

3. Global Water Crisis and Well-being

● Host: Faculty of Engineering ● Language: English

4. Health and Nursing Care in an Ageing Society: What is Happiness?

● Host: Graduate School of Medicine ● Language: Japanese

● Panel Discussion

LEGEND

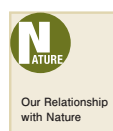
0	Date
Title	
a Outline	
b Venue	
c Language	
d Registration	
e Organizer	
f Co-host	
g Contact	

Registration can be made via our website where you see this icon.

[Registration]

<https://www.sustain.hokudai.ac.jp/sw/application/>

The background color indicates the type of events. These events are open to everyone.



Hokkaido University supports the "Children's Contest for the Environment in Sapporo" (hosted by the City of Sapporo).

This event will offer great opportunities for elementary and junior high school students in Sapporo to introduce the environmental protection efforts they have been involved in. Hokkaido University will award the Sustainability Prize to the group with the most outstanding activities.



■ The contest is open to the public and will be held at Sapporo L-PLAZA on November 27.

■ Contact: City of Sapporo
TEL: +81-(0)11-211-2877

Event Schedule

● Main Target ○ Welcomes

Date		Title	Expert	Univ.& Public Layman +α	Layman	HS	< JH	28	34	29	30	32
Sep.25 (Sat.)	2	Public Lecture: Fertility and Sustainable Future	○	●	○	○						
Oct.13 ~ 15 (Wed. ~ Fri.)	13	Science Café:"Shirabekata" on Earth vol.1-3	○		●	○	○					
Oct.16 (Sat.)	27	The 7th Presentation & Debate Competition, School of Economics and Business Administration	●		○	○						
Oct.22 (Fri.)	3	Public Lecture: Hokkaido University Sustainability Form	○		●	●						
Oct.24 (Sun.)	4	Public Lecture: Let's Think Together! Our Environment and Children's Health	○	○	●	○						
Oct.24 ~ 29 (Sun. ~ Fri.)	28	The 2nd Hokkaido University Sustainability Research Poster Contest I	●		●	○		Oct.24				
Oct.24 ~ 31 (Sun. ~ Sun.)	34	Special Event: Ride and Think for Sustainability in Hokkaido Univ.	●		●	●	●	Oct.24				
Oct.25 ~ 26 (Mon. ~ Tue.)	1	SW2010 Opening Event Toward a Society Offering Quality of Life and Human Dignity for All -Comprehensive exploration into the causes of the crises we face -	●	●								
Oct.25 (Mon.)	14	International Workshop on Green Circuits and Systems	●	○								
Oct.25 ~ Nov.6 (Mon. ~ Sat.)	29	Fair Trade Fair vol.5	●		●	●	○			Oct.25		
Oct.26 ~ Nov.3 (Tue. ~ Wed.)	30	Controlling Zoonoses: An Experimental Exhibition on Integrative Science	○	○	●	●	●				Oct.26	
Oct.27 (Wed.)	35	Invitation to Study Abroad Programs: SD on Campus - A Global Quality of International Campus Life	●		●							
Oct.27 (Wed.)	36	Sustainable Campus Tour	●		●	○						
Oct.27 (Wed.)	37	First Sustainable Campus Contest	●		●	○						
Oct.28 (Thu.)	15	International Symposium on Renewable Energy	●		●							
Oct.29 (Fri.)	31	International Symposium - Global Campus for Sustainability Education	●	○								
Oct.29 (Fri.)	16	Symposium on Northern Mountains: Past Change and Monitoring Network	●		●	○						
Oct.29 ~ Nov.3 (Fri. ~ Wed.)	32	CLARK THEATER 2010	●		●	●	●	Oct.29				Oct.29
Oct.30 (Sat.) AM	17	Key Issues for Carbon Storage and Biodiversity - Tropical Peat and Forest-	●									
Oct.30 (Sat.) PM					●	○						
Oct.30 (Sat.)	5	Hokkaido Community Care Symposium	●		●	○						
Oct.31 ~ Nov.5 (Sun. ~ Fri.)	28	The 2nd Hokkaido University Sustainability Research Poster Contest II	●		●	○		Oct.31		Oct.30 Nov.1		
Nov.1 (Mon.)	6	Symposium on the Possibility of a Green Welfare State : Toward Sustainable and Inclusive Growth	○	●	●	○			Until Oct.31		Oct.31	
Nov.1 (Mon.)	18	Symposium on EcoDesign for a Low Carbon Society Based on Regional Partnerships Between Urban and Rural Areas	●	○							Nov.2	
Nov.1 ~ 2 (Mon. ~ Tue.)	19	Workshop for the 2nd Amur-Okhotsk Consortium Meeting 2011	●	●								
Nov.2 (Tue.)	7	Symposium on Expanding the Potential of Children in Future Society	●	●								
Nov.3 (Wed.)	8	The Instruction on Research Diagnostic Criteria for Temporomandibular Disorders	●	○								
Nov.3 (Wed.)	20	Seminar on Environmental Policy ~ Biodiversity and Climate Change ~	●		●	○	○					
Nov.3 (Wed.)	9	Public Program on Health Sciences	○	○	●	○						
Nov.3 (Wed.)	21	Public Lecture: The 3rd International Symposium on Sentinel Earth- Advances in Satellite Imagery Data and GIS and Their Applications-			●	○						
Nov.4 ~ 5 (Thu. ~ Fri.)	21	The 3rd International Symposium on Sentinel Earth-Advances in Satellite Imagery Data and GIS and Their Applications-	●									
Nov.4 (Thu.)	22	Business-Academia-Government Collaboration Seminar on Developments of Geo-spatial Information and Future World II	●	●		○						
Nov.5 (Fri.)	23	Hokkaido Marine Bioscience Symposium	●	○								
Nov.6 (Sat.)	33	The 14th Ainu Language Speech Contest "ITAK AN RO" ~ Let's Speak in Ainu Language!	●		●	●	●					
Nov.6 (Sat.)	10	International Symposium on Child Poverty and Anti-poverty Strategies	●	●								
Nov.6 (Sat.)	11	International Symposium on "Reproductive Rights and the Sustainability of Women's Health in Historical and Contemporary Perspectives"	●	●	○	○						
Nov.7 (Sun.)	12	Special Lecture - Intergenerational Justice and Health in an Aging Society	●	●								
Nov.9 (Tue.)	24	Public Lecture: Theory and Practice of Fisheries Sustainability Science	●	○	●	○						
Nov.15 (Mon.)	25	SCJ Hokkaido District Conference "Green Innovations Originating in Hokkaido"	●	○								
Dec.8 (Wed.)	26	JSPS Core University Program Seminar "Proposal for Sustainable Fisheries"	●	○	●							

Program information is subject to change. Updated information is available on our website: <http://www.sustain.hokudai.ac.jp/sw/>

Quality of Life and Human Dignity for All



Striving to create a community whose members enjoy physical, mental, and social well-being as well as a high quality of life.

2 September 25 (Sat.) 15:00 ~

Public Lecture: Fertility and Sustainable Future

a This is a public lecture on the theme of sustainable development and health. Speakers, including overseas university researchers, will explain sustainable development from the viewpoint of healthcare. Special focus will be placed on Japan's falling birthrate in the context of parallel experiences of other industrialized countries. The lecture will examine factors contributing to low birthrates by comparing international experiences and will highlight their implications for creating a sustainable society. We look forward to the participation of the general public and high school and university students who are interested in the relationship between health and society in terms of our immediate surroundings and the world as a whole.

b Hokkaido University Conference Hall **c** Japanese / English **d** Not-required (Charge: free)
e Hokkaido University **f** University of Geneva **g** Department of Global Health and Epidemiology, Graduate School of Medicine, Hokkaido University
 FAX: +81-(0)11-706-7374 E-mail: sw2010@ghe.med.hokudai.ac.jp

3 October 22 (Fri.) 18:30 ~

Hokkaido University Sustainability Forum



a The forum will consider quality of life and human dignity from the viewpoints of individuals and the environment that supports us. It will offer opportunities to look at lifestyles from the perspectives of the inner life, interpersonal ties, the natural environment and urban infrastructure through discussions involving Hokkaido University researchers. We look forward to the participation of members of the general public looking for a weekend of contemplation.

b Hokkaido University Conference Hall **c** Japanese **d** Required (Charge: free) Please register via our website **e** Hokkaido University **f** The Hokkaido Shimbun Press
g Secretariat for Sustainability Forum, The Hokkaido Shinbun Press (Contact: M.Hoshi, T.Nakase) FAX: +81-(0)11-210-5727 E-mail: kokoku3@hokkaido-np.co.jp

4 October 24 (Sun.) 13:30 ~

Public Lecture Commemorating the Establishment of the Hokkaido University Center for Environmental and Health Sciences: Let's Think Together! Our Environment and Children's Health



a This lecture meeting will highlight the both positive and negative effects of our immediate natural and social environment on the health of babies and children both today and in the future. We will report our findings from studies we have conducted over 10 years in Sapporo and Hokkaido, in addition to introducing the Japan Eco & Child Study to be launched by the Ministry of the Environment next year. We would like to discuss environmental factors and the health of children with audience, and we hope that many citizens, students, representatives of local governments and experts in the field of healthcare will attend.

b Hokkaido University Conference Hall **c** Japanese **d** Required (Charge: free) Please register via our website by Oct.15 **e** Center for Environmental and Health Sciences, Hokkaido University **g** Center for Environmental and Health Sciences, Hokkaido University
 TEL: +81-(0)11-706-4747 FAX: +81-(0)11-706-4725 E-mail: e.h.s@med.hokudai.ac.jp

5 October 30 (Sat.) 13:00 ~

Hokkaido Community Care Symposium



a Medical services offered in local regions are at risk of collapse due to doctor shortages. This symposium will feature discussion on the types of cooperation that can be established between the government and local residents to protect medical services as well as on the viability of such cooperation. In the creation of sustainable local communities, health protection can no longer be left to medical professionals alone. It is necessary to form a mechanism for collaboration with clarified roles and challenges for local residents, the government, welfare workers and medical professionals. We look forward to the participation of university students, members of the general public, local government representatives and experts interested in enhancing the quality of medical and welfare services provided.

b Hokkaido University Conference Hall **c** Japanese **d** Please register via our website or e-mail. (1,000Yen.Students:free) **e** Hokkaido Community Health Forum **f** Hokkaido University Hospital Postgraduate Clinical Training Center **g** Hokkaido University Graduate School of Medicine Healthcare Systems Research (Contact: M.Nikaido)
 TEL: +81-(0)11-706-7005 FAX: +81-(0)11-706-7628 E-mail: nikaidd@med.hokudai.ac.jp

6 November 1 (Mon.) 14:00 ~

Symposium on the Possibility of a Green Welfare State : Toward Sustainable and Inclusive Growth

a This symposium will consider the feasibility of a green welfare state as a solution to maintaining a harmonious balance among the natural environment, social security and the economy. Much attention these days is paid to sustainable cooperation among the three fields of the natural environment (environmental policy), the reproduction of the next generation (social security policy) and the economy (economic and fiscal policy), which were previously independent of one another. We look forward to the attendance of many people at the keynote lecture by Professor Y. Hiroi from Chiba University, who has discussed welfare policy from the viewpoint of a steady-state society, and the panel discussion involving Professor J. Yamaguchi from Hokkaido University and other distinguished panelists.

b Hokkaido University Conference Hall **c** Japanese **d** Not-required (Charge: free) **e** The Advanced Institute for Law and Politics, Hokkaido University **f** Project of JSPS Grants-in-Aid For Scientific Research: New Politics for Welfare Regime and Organized Interests in Japan **g** The Advanced Institute for Law and Politics, Hokkaido University TEL: +81-(0)11-706-4005 E-mail: jcenter@juris.hokudai.ac.jp

7 November 2 (Tues.) 13:00 ~

Symposium on Expanding the Potential of Children in Future Society

a This symposium will include discussion on the physical fitness and health of children, their mental development, culture and child rearing, and parenting in a gender-equal world with the aim of creating a society that values the future potential of children. Due to demographic graying and a falling birthrate, Japan's population has begun to decline. It is therefore imperative to develop a new outlook for the country with ties to the rest of the world and conditions in which children – the guardians of the future – can grow up in perfect health. We hope that members of the citizen, students and experts who are interested in child health and child-rearing will join us in thinking about a society that will expand the potential of children.

b Hokkaido University Conference Hall **c** Japanese **d** Not-required (Charge: free) **e** Faculty of Health Sciences, Hokkaido University **f** Hokkaido University Center for Environmental and Health Sciences, Support Office for Female Researchers **g** Faculty of Health Sciences, Hokkaido University TEL: +81-(0)11-706-3315 E-mail: shomu@hs.hokudai.ac.jp

8 November 3 (Wed.) 10:00 ~

The Instruction on Research Diagnostic Criteria for Temporomandibular Disorders



a Temporomandibular joint disorder is becoming a lifestyle-related disease among Japan's graying population. This workshop offers opportunities to learn about the diagnostic approach to this disease, whose symptoms include jaw pain and reduced ability to open the mouth. Dr. Thomas List from Sweden and Dr. Peter Svensson from Denmark, who played central roles in the recent establishment of international diagnostic criteria for the condition (RDC/TMD), will present the diagnostic approach at the workshop. We hope to see a wide range of dental practitioners and researchers at this world's first workshop covering related leading-edge research.

b Hokkaido University Conference Hall **c** Japanese / English **d** Required (Charge: free)
e Graduate School of Dental Medicine, Hokkaido University
g Graduate School of Dental Medicine, Hokkaido University (Contact: T. Arima)
 TEL: +81-(0)11-706-4275 FAX: +81-(0)11-706-4276 E-mail: tar@den.hokudai.ac.jp

9 November 3 (Wed.) 13:00 ~

Public Program on Health Sciences



a This program is a three-hour introduction to a wide range of up-to-date research findings for qualitative improvement of health, from the basics of health sciences to applied technologies for the enhancement of vital functions. The event will focus on three topics in particular: 1. research on functionality assessment of protein foods for the prevention of lifestyle-related diseases; 2. research on diagnosis and treatment of autism, Asperger's syndrome and other diseases; and 3. development of ideal wheelchair and office chair designs in consideration of physical stability. We look forward to the participation of members of the general public, high school and university students, and experts who are interested in basic science concerning healthcare and technologies that will help to promote nursing care and welfare among other developments.

b 6th Floor, Faculty of Health Sciences, Hokkaido University **c** Japanese **d** Required (Charge: free) Please register via website, e-mail or phone to the address listed below by October 29.
e Public Program Committee in Faculty of Health Sciences, Hokkaido University
g Faculty of Health Sciences, Hokkaido University
 TEL: +81-(0)11-706-3315 E-mail: shomu@hs.hokudai.ac.jp

10 November 6 (Sat.) 13:00 ~

International Symposium on Child Poverty and Anti-poverty Strategies



a This symposium will welcome a representative of the Child Poverty Action Group – a UK charity that promotes pioneering public activities to combat child poverty. The event will provide a forum for participants from Japan and the UK to discuss policy issues related to child poverty and awareness raising and to conceive counter-strategies for the future. Poverty adversely affects the growth and development of children, and Japan also suffers from policy issues and practical problems with child poverty in a wide range of fields including those of education, welfare, health and medical care. We look forward to the participation of members of the general public wishing to address poverty issues as well as the attendance of students, educators and experts.

b Hokkaido University Conference Hall **c** Japanese / English
d Required (Charge: free) Please register via website, e-mail, or fax by October 31.
e Graduate School of Education, Hokkaido University **f** Society for the Study of Poverty
g Graduate School of Education, Hokkaido University (Contact: I. Matsumoto, M. Toriyama)
 FAX: +81-(0)11-706-3114 E-mail: tmadoka@edu.hokudai.ac.jp

International Symposium on "Reproductive Rights and The Sustainability of Women's Health in Historical and Contemporary Perspectives"

- a** At this symposium, leading historians from Japan and the U.S. will discuss women's health and welfare. Although women's decisions on reproductive matters such as abortion, contraception and childbirth significantly affect their health and well-being, the enormous economic and social impacts of these issues have caused families, governments, religious organizations among others to impose a variety of related restrictions, including many adverse to the well-being of women and children. This session will provide chances to consider what should be changed and what should be left alone so that individuals can make optimal decisions for a better society.

b Hokkaido University Conference Hall **c** English **d** Not-required (Charge: free)
e Center for Applied Ethics and Philosophy, Hokkaido University
f Center for Applied Ethics and Philosophy, Hokkaido University (Contact: M.Nakachi)
 TEL: +81-(0)11-706-2865 E-mail: mnakachi@let.hokudai.ac.jp

Special Lecture – Intergenerational Justice and Health in an Aging Society

- a** We will host a special lecture by Harvard University's Prof. Norman Daniels – a leading expert on public health ethics – on health promotion in an aging society and the allocation of medical resources necessary for such promotion. As a population ages, some can and some cannot afford proper medical care. Professor Daniels will talk about such issues from the viewpoint of Justice. He will also focus on the allocation of medical resources, such as doctors, medicine and medical equipment, that will catalyze the promotion of public health. As a Japanese interpretation service will be provided for this English-language lecture, we hope many young people and members of the general public will attend.

b Hokkaido University Center for Experimental Research in Social Science **c** English
d Not-required (Charge: free) **e** Center for Applied Ethics and Philosophy, Hokkaido University
f Center for Applied Ethics and Philosophy, Hokkaido University (Contact: S.Majima)
 TEL: +81-(0)11-706-3062 E-mail: caep@let.hokudai.ac.jp

Our Relationship with Nature



Pursuing a balance with Earth's ecosystems so all living creatures & humans can coexist in harmony.

Science Café: "Shirabekata" on Earth vol.1-3

- a** "Shirabekata" on Earth is the name given to a series of events intended to provide opportunities to find out about research, science, the environment, the earth, living creatures and other related matters. Its effects are akin to those of cases in which people come to feel familiar with distant foreign countries and towns by watching travel programs on TV or reading books about them. This Science Café event will run for three consecutive evenings with guest speakers covering the natural environment and living creatures in our immediate surroundings. Their talks will also be related to today's key topic of biodiversity. We look forward to the participation of junior high and high school students, university students and members of the general public.

b Sapporo 55 Bldg. 1F Inner Garden (N5,W5,Sapporo) **c** Japanese **d** Not-required (Charge: free)
e Executive Committee of "Shirabekata" on Earth **f** IFES-GCOE Regional Education and Outreach Promotion Office, Hokkaido University **g** IFES-GCOE Regional Education and Outreach Promotion Office, Hokkaido University (Contact: Y.Sato) E-mail: shirabekata@ees.hokudai.ac.jp

International Workshop on Green Circuits and Systems

- a** This workshop will present a keynote lecture by University of Louisiana Professor Magdy A. Bayoumi – one of the world's foremost researchers on cutting-edge wireless networks – on the direction of green system technology. The event will also include the presentation of research findings by students and discussion on research into the latest technologies for next-generation information communication and multi-media systems. We look forward to the participation of members of the general public, representatives of businesses and students who are interested in today's global trends of promoting energy conservation through the integration of all information systems such as telephone lines, Internet frameworks and mobile phone networks.

b Room No.17, 11th floor of the Graduate School of Information Science and Technology, Hokkaido University **c** English **d** Not-required (Charge: free) **e** Center for Next-Generation Information Technology based on Knowledge Discovery and Knowledge Federation, Hokkaido University Graduate School of Information Science and Technology, Hokkaido University
f GCOE Office, Graduate School of Information Science and Technology, Hokkaido University
 FAX: +81-(0)11-706-7890 E-mail: gcoc@ist.hokudai.ac.jp

International Symposium on Renewable Energy

- a** This symposium will provide a chance for researchers and actors from inside and outside of Japan to discuss together about measures and future prospects to develop and distribute renewable energy such as biomass, solar power, wind power, water power and geothermal heat. Renewable energy can contribute to mitigate global warming because the use yield relatively little amount of CO₂. The use of renewable energy also helps to rise the energy self-support ratio of countries like Japan which are not rich in resources such as oil and coal. We welcome participation of citizens and students who are interested in these important issues that must be tackled actively in each country and region including Hokkaido.

b Hokkaido University Conference Hall **c** Japanese / English **d** Not-required (Charge: free)
e Hokkaido University Low-Carbon Society Project
f Hokkaido University Public Policy School (Contact: Y.Kondo)
 TEL & FAX: +81-(0)11-706-4717 E-mail: low-carbon@hops.hokudai.ac.jp

Symposium on Northern Mountains: Past Change and Monitoring Network

- a** Environmental change is rapidly taking place in the mountains of northern Japan, such as the Daisetsuzan National Park, as represented by the decreasing diversity of alpine plants. This event will outline such changes found through field and satellite observation efforts implemented over a period of many years. The session will also include discussion of the environmental observation and monitoring network needed to assess the sustainability of ecosystem services in northern mountain areas and to prevent weather disasters such as last year's fatal accident that killed a number of elderly hikers. We look forward to the participation of members of the general public, students and experts who are interested in mountain ecosystems and biodiversity.

b Hokkaido University Conference Hall **c** Japanese / English **d** Not-required (Charge: free) **e** IFES-GCOE, Graduate School of Environmental Science Graduate School of Agriculture **f** "Current situation of biodiversity crisis in the forest-alpine ecotone and mechanism under global change" (The Environment Research and Technology Development Fund D-0904 of the Ministry of Environment, Japan) **g** Global COE Unit, Faculty of Environmental Earth Science, Hokkaido University (Contact: A. Kondoh) TEL: +81-(0)11-706-4862 FAX: +81-(0)11-706-4867 E-mail: a.kondoh@ees.hokudai.ac.jp

Key Issues for Carbon Storage and Biodiversity -Tropical Peat and Forest-

- a** **Morning:** Researchers from Hokkaido University – an institution advocating the Carbon Initiative at the cutting edge of tropical peat and forest research – will discuss the tropical peat forest, biodiversity and the establishment of an international network. **Afternoon:** The present status of tropical peat and forest, which are currently facing widespread destruction, and challenges related to their conservation will be outlined for high school students and members of the general public. Attendees will learn the crises and what will become of the massive amounts of carbon stored in tropical peat lands and rich biodiversity extending over Southeast Asian islands, the Brazilian Amazon and Central Africa.

b Hokkaido University Conference Hall **c** Japanese / English **d** Not-required (Charge: free)
e Center for Sustainability Science, Hokkaido University
f Hokkaido University Center for Sustainability Science (Contact: K.Hirose)
 TEL: +81-(0)11-706-4530 FAX: +81-(0)11-706-4534

Symposium on EcoDesign for a Low Carbon Society Based on Regional Partnerships Between Urban and Rural Areas

- a** This symposium will showcase the results of research activities aimed at creating a low-carbon society – the term given to a society with low levels of CO₂ emissions (a major cause of global warming) – in Asia. We have studied the nature of cooperation between rural and urban areas, including investigation of a system for the efficient use of biomass resources produced in rural areas to produce energy for urban areas. We will exchange views on future scenarios in Asia while introducing the ideal material-cycle system for energy and materials as understood from relevant examples in Hokkaido and China.

b Hokkaido University Conference Hall **c** Japanese **d** Not-required (Charge: free) **e** Center for Sustainability Science, Hokkaido University **f** Osaka University, Ritsumeikan University
g Hokkaido University Center for Sustainability Science (Contact: T.Sato)
 TEL: +81-(0)11-706-4586 FAX: +81-(0)11-706-4534 E-mail: toshikisato@census.hokudai.ac.jp

Workshop for the 2nd Amur-Okhotsk Consortium Meeting 2011

- a** The Amur-Okhotsk Consortium is an international network of scientists aiming to conserve the environment of the Amur River basin (shared by Mongolia, Russia and China) and the Sea of Okhotsk in its downstream area. This year, the consortium focuses on selecting topics of discussion for its second meeting scheduled for 2011. Established in November 2009, the consortium seeks to develop a common understanding of sustainable environmental use that does not damage the diversity of regional economies, society and culture. We look forward to the participation of students and citizens who are interested in the development of an international framework for environmental conservation.

b Hokkaido University Slavic Research Center **c** Japanese, Russian, English **d** Not-required (Charge: free)
e Institute of Low Temperature Science & Slavic Research Center, Hokkaido Univ.; New Energy Resources Research Center, Kitami Institute of Technology **f** Research Institute for Humanity and Nature, Hokkaido Univ. GCOE Program "Reshaping Japan's Border Studies", MLIT Hokkaido Regional Development Bureau **g** Pan Okhotsk Research Center, Institute of Low Temperature Science, Hokkaido Univ. TEL: +81-(0)11-706-7142
 E-mail: ao-symposium@lowtem.hokudai.ac.jp URL: http://www.chikyuu.ac.jp/AMOC/

Seminar on Environmental Policy
~ Biodiversity and Climate Change ~

- a** This seminar will showcase biodiversity conservation and climate change issues in the context of policy measures while taking international trends into account. This event will introduce the latest trends in regard to topics of discussion by the 10th Conference of Parties to the United Nations Convention on Biological Diversity (COP10), scheduled to be held in Nagoya in October. The session will provide opportunities to examine environmental policies aimed at resolving biodiversity conservation for people in Hokkaido. This seminar also provides the trend of international discussion concerning climate change issues and the trend of domestic measures, starting the 16th Conference of the Parties to the United Nations Framework Convention on Climate Change (COP16), which will be held in Mexico in November.
- b** Hokkaido University Conference Hall **c** Japanese **d** Required (Charge: free) Please register via our website. **e** Hokkaido University Low-Carbon Society Project **f** Ministry of the Environment Hokkaido Regional Office **g** Ministry of the Environment Hokkaido Regional office (Contact: M.Yasuda) TEL: +81-(0)11-299-1952 FAX: +81-(0)11-736-1234 E-mail: reo-hokkaido@env.go.jp

The 3rd International Symposium on Sentinel Earth—Advances in Satellite Imagery Data and GIS and Their Applications—

- a** This is an open lecture for the general public and an international symposium for experts. The public lecture will focus on problems stemming from CO2 emissions – a major cause of global warming – and give an easy-to-understand overview of the related issues. The symposium will provide a forum for the presentation of findings on research into earth observation using satellite image data and their latest usage. The outcomes of research regarding the latest progress in Geographic Information Science (GIS) and the state of its usage will also be presented, along with the results of studies on using satellite data to detect forest/wild fires in Alaska and Indonesia.
- b** Hokkaido University Conference Hall **c** Public Lecture: Japanese / Symposium: English **d** Not-required (Charge: free) *Details will be announced on the website. **e** Hokkaido University, Asia Institute of Technology, University of Alaska, University of Palangkaraya, Japan Aerospace Exploration Agency (JAXA), Remote Sensing Technology Center of Japan (RESTEC) **g** Graduate School of Information Science and Technology, Hokkaido University (Contact: R. Ishige) TEL: +81-(0)11-706-7691 FAX: +81-(0)11-706-6295

Business-Academia-Government Collaboration Seminar on
“Developments of Geo-spatial Information and Future World II”

- a** This seminar will introduce the latest trends of geo-spatial information usage in industry, government and academia, including its adoption for industrial promotion, conservation and management of the natural environment and the development of new welfare services. Geo-spatial information provides a social information infrastructure with growing expectations as a tool for creating a sustainable society. Using such information together with the geographic information system (GIS) and satellite positioning technologies is expected to help promote agriculture and fisheries – leading industries in Hokkaido – and develop social welfare services that will be effective in an aging society. We look forward to the participation of representatives from businesses and local governments as well as members of the general public who are interested in the application of this information infrastructure.
- b** Hokkaido University Conference Hall **c** Japanese **d** Not-required (Charge: free) **e** Hokkaido University Graduate School of Letters, GIS Association of Japan Hokkaido Regional Office, Hokkaido GIS/GPS Society, Non-profit Organization "Digital Hokkaido" **g** Hokkaido University, Graduate School of Letters (Contact: Y.Hashimoto) TEL & FAX: +81-(0)11-706-4019 E-mail: you@chiri.let.hokudai.ac.jp

Hokkaido Marine Bioscience Symposium

- a** This symposium will offer opportunities to consider current and future effects of global warming, ocean acidification and human activities on marine organisms in seas close to Hokkaido. Surrounded by three seas (the Pacific Ocean, the Sea of Japan and the Sea of Okhotsk), Hokkaido has rich marine ecosystem environment and marine resources. In this symposium, citizens, students, fisheries parties and experts will gather in a room to discuss latest research findings towards marine ecosystem conservation and sustainable use of marine resources.
- b** D-201, Graduate School of Environmental Science, Hokkaido University **c** Japanese **d** Not-required (Charge: free) **e** Hokkaido Marine Bioscience Society, IFES-GCOE Global COE Program "Establishment of Center for Integrated Field Environmental Science", Hokkaido University **g** Graduate School of Environmental Science, Hokkaido University (Contact: T.Okino) TEL & FAX: +81-(0)11-706-4519 E-mail: okino@ees.hokudai.ac.jp

Public Lecture: Theory and Practice of Fisheries Sustainability Science



- a** This event will provide opportunities to contemplate what should be done to ensure the sustainability of marine resources, such as salmon, sardines and tuna, so that people around the world can continue to use as seafood. Items on the agenda include food miles (an indicator how far food has travelled before it reaches the consumer), eco-labeling, food traceability, aquaculture and more. To conserve marine ecosystems and ensure the sustainable harvesting of seafood, both academic work and practice must be pursued. We look forward to the participation of students, members of the general public and representatives of businesses who are interested in fisheries sustainability.
- b** Hakodate Community Design Center 2nd floor, Hakodate-city **c** Japanese / English **d** Required (Charge: free) Please register via website, e-mail or fax listed below by October 29. **e** Faculty of Fisheries Sciences, Hokkaido University **f** Science Center of Japan, Hakodate City **g** Faculty of Fisheries Sciences, Hokkaido University (Contact: M.Kaeriyama) TEL & FAX: +81-(0)138-40-5605 E-mail: salmon@fish.hokudai.ac.jp

SCJ Hokkaido District Conference " Green Innovations Originating in Hokkaido"



- a** This lecture meeting highlights proposals for new lifestyles as well as new forms of industry and economy that capitalize on Hokkaido's characteristics of a vast land area and a rich natural environment and on locally developed science and technology. Green innovation is aimed at creating coexistence between nature and humans by conserving and restoring the natural environment through reduced impacts on it and adapting to environmental changes such as natural disasters. The concept also helps to advance human development in general. This event will involve discussion of future prospects for green innovation and consideration of new roles for science and technology. We look forward to the participation of researchers, university students and members of the general public who are interested in the latest academic achievements in Hokkaido.
- b** Hokkaido University Conference Hall **c** Japanese **d** Required (Charge: free) Please register via web site, e-mail, or fax **e** Hokkaido District Conference, Science Council of Japan; Hokkaido University **g** Research Department, Hokkaido University (Contact: Y. Harada) TEL: +81-(0)11-706-2155 FAX: +81-(0)11-706-4873 E-mail: suishin@general.hokudai.ac.jp

JSPS Core University Program Seminar
"Proposal for Sustainable Fisheries"

- a** This seminar will focus on future cooperative relations in fisheries between Japan and Korea and offer the opportunity to review a project implemented by Hokkaido University and Korea's Pukyong National University over the past decade entitled Elucidation of fish resource fluctuation and development of zero-emission fishery with low environmental burden. The two countries will propose a new form of fisheries for the maritime environment they share to make effective use of marine resources while avoiding waste and the imposition of burdens on the surrounding environment; that is, they will make a proposal for sustainable fisheries in the future.
- b** Hanabishi Hotel, Yunokawa Onsen, Hakodate-city (1-16-18, Yunokawa-cho, Hakodate) **c** Japanese / Korean (Translation will be provided) **d** Not-required (Charge: free) **e** Hokkaido University, Pukyong National University **f** Japan Promotion of Science, Korea Research Foundation **g** Faculty of Fisheries Sciences, Hokkaido University (Contact: K.Sawada) TEL: +81-(0)138-40-5504 E-mail: sawa3@jimu.hokudai.ac.jp

Learning for
the Future

Considering the history, wisdom, and culture unique to each region while nurturing minds, hearts, and friendships to pave the way to a new future.

The 7th Presentation & Debate Competition, School of Economics and Business Administration

- a** Hokkaido University undergraduate and graduate students majoring in a variety of fields will organize teams and present their unique ideas on the theme of *Revitalizing Agriculture – Redesign New Business*. They will examine their strengths and weaknesses through the medium of debate. This year's competition – the seventh in the series – will encourage students accurately understand the present state of business in Japan and aim for more creative design to address the situation at hand. Competing teams will make proposals for agricultural revitalization based on surveys and analysis that they will implement continuously from summer onward. We look forward to seeing high school, university and graduate students as well as those engaged in agricultural business and the general public.
- b** Hokkaido University Center for Experimental Research in Social Science W102, 101, 201, 202 **c** Japanese **d** Not-required (Charge: free) **e** School of Economics and Business Administration, Hokkaido University **g** "The 7th Presentation & Debate Competition" Management Office (Contact: K.Tsukada) TEL: +81-(0)11-706-4066 FAX: +81-(0)11-706-4947 E-mail: sacade@econ.hokudai.ac.jp

The 2nd Hokkaido University Sustainability Research Poster Contest

- a** HU students will review their current research programs from the viewpoint of contribution to efforts for the creation of a sustainable society, summarize these contributions in poster format and make presentations in Japanese or English. Nearly 100 posters will be exhibited over a period of two weeks. Communication Time (CT) sessions will be set up on Tuesdays, when students will make presentations in front of their posters and answer questions from visitors. The contest will provide a wealth of opportunities to learn about future scenarios envisioned by students as well as to find out about their research programs and gain experience of research poster presentations. We look forward to welcoming all comers – especially high school, university and graduate students.
- b** Hokkaido University Conference Hall **c** Japanese / English **d** Not-required (Charge: free) **e** Hokkaido University **g** Secretariat for Hokkaido University Sustainability Weeks 2010 TEL: +81-(0)11-706-2093, FAX: +81-(0)11-706-2095 E-mail: office1@sustain.hokudai.ac.jp

Fair Trade Fair vol.5

- a** During this fair, you will be able to shop for foodstuffs and general merchandise that students often purchase in order to increase awareness of fair trade products, i.e., those traded with a focus on paying fair wages to producers in developing nations. This year's fair is the fifth of its kind; as at last year's event, a lecture meeting will be also held (date and time TBA) to provide opportunities for attendees to learn about the present status of fair trade and related issues. Buying fair trade products leads to a sustained improvement in the living standards of those who produce them. We hope that the items on sale, which will include chocolate, coffee beans and other products made in consideration of environmental protection, will generate enhanced interest in fair trade among many students, faculty members and members of the general public.
- b** Hokkaido Univ. Co-op Building 1F **c** Japanese **d** Not-required (Charge: free)
e International cooperation student association "yui" **f** Hokkaido Univ. Co-op **g** International cooperation student association "yui" (Contact: G. Matsushima)
TEL: +81-(0)80-1768-1640 E-mail: yui.international.cooperation@gmail.com

Controlling Zoonoses: An Experimental Exhibition on Integrative Science

- a** The Hokkaido University Museum will display cutting edge research on zoonotic diseases, whose causative agents infect both humans and animals. Visitors will learn about diseases such as influenza and Ebola hemorrhagic fever through panels, videos, observation of infections through microscopes, and by experimentation with laboratory instruments. In order to establish preemptive measures to predict and prevent outbreaks and epidemics of zoonotic diseases, it is imperative that interdisciplinary research and education is conducted by experts in the fields of medicine, veterinary medicine, pharmaceuticals, engineering, and science. This exhibition explores the full potential of Integrative Sciences and is open to the public. We hope that a wide range of students—from those in junior high to those in university, including researchers—take advantage of this opportunity we present to you.
- b** Hokkaido University Museum **c** Japanese **d** Not-required (Charge: free) **e** The Hokkaido University Museum **f** Global COE Program "Establishment of International Collaboration Centers for Zoonosis Control", Hokudai Integrated Science Consortium, Hokkaido University Research Center for Zoonosis Control **g** The Hokkaido University Museum (Contact: H. Matsueda) TEL & FAX: 011-706-2754 E-mail: matsueda@museum.hokudai.ac.jp

International Symposium – Global Campus for Sustainability Education

- a** In this international symposium, we will discuss on educational methods of sustainability science and its operational problems for the establishment of global campuses where students in different countries will learn together. Several speakers are invited from partner universities of Indonesia, Taiwan, and other countries with whom we have already collaborated e-lectures on sustainability. We look forward to participation of educators who are interested in the development of international educational programs. This symposium is financially supported by MEXT special coordination funds for promoting science and technology: Strategic program for fostering environmental leaders.
- b** Hokkaido University Conference Hall **c** English **d** Not-required (Charge: free) **e** Center for Sustainability Science, Hokkaido University **f** The University of Palangka Raya, International Institute for Water and Environmental Engineering, National Cheng Kung University, Zhejiang University, Pukyong National University, Swinburne University of Technology, University Sains Malaysia, Gajah Mada University
g Center for Sustainability Science, Hokkaido University (Contact: S. Tanaka)
TEL: +81-(0)11-706-4530 FAX: +81-(0)11-706-4534 E-mail: jimu@census.hokudai.ac.jp



CLARK THEATER 2010

- a** With the aim of creating a forum for communication through images and movies, this theater will be established to show culturally enlightened movies for a limited period. The concept of this fifth year in the series is "Beyond Borders." We will show a variety of movies that transcend generations and status as well as movie genres and themes. A number of related events are also scheduled, including the showing of a short film produced at Hokkaido University, a documentary called Gaia Symphony and a talk show with guests. We look forward to the participation of junior and high school students, university students and members of the general public.
- b** Hokkaido University Clark Memorial Student Center **c** Japanese / English / Others
d Not-required (Some films will be free of charge.) **e** Hokudai Theater Project Execution Committee 2010 **f** Hokkaido University GAIA Project **g** Hokudai Theater Project Execution Committee 2010 E-mail: info@clarktheater.jp

~The 14th Ainu Language Speech Contest "ITAK AN RO"~ ~Let's Speak in Ainu Language!~

- a** At this event, people learning Ainu language at 14 Ainu language schools in Hokkaido and elsewhere in the country will gather to exhibit the skills they have honed in practice. This year's ITAK AN RO Ainu language speech contest – the 14th in the series – will consist of the Oratorical Division and the Oral Literature Division. It will include performances of *Kamuy yukar* stories, and roughly 50 contestants of all ages will participate. We hope that many people ranging from elementary school students to adults will take this precious opportunity to experience the rarely heard Ainu language and remember that Japan is a multicultural, multi-ethnic and multilingual country.
- b** Hokkaido University Clark Memorial Student Center **c** Japanese / Ainu **d** Not-required (Charge: free) **e** The Foundation for Research and Promotion of Ainu Culture **f** Center for Ainu & Indigenous Studies, Hokkaido University **g** The Foundation for Research and Promotion of Ainu Culture TEL: +81-(0)11-271-4171 E-mail: ainu@frpac.or.jp

Sustainable Campus



October 27 (Wed.) is Sustainable Campus Day. Our campus is a stage for social experimentation and place to develop new sustainable models.

Special Event: Ride and Think for Sustainability in Hokkaido University

- a** Here, students from Hokkaido University Graduate School of Environmental Science will operate Velotaxi cycle rickshaws inside and outside the Sapporo Campus. Visitors can ride Velotaxis bearing designs that reflect the university's environmental initiatives. Enjoy a leisurely trip between venues on this CO2 emission-free mode of transport while chatting with the student driver.
- b** Street at Hokkaido University Sapporo Campus **c** Japanese
d Not-required (Charge: free) **e** IFES-GCOE Regional Education and Outreach Promotion Office, Hokkaido Univ. **f** Nonprofit Organization EcoMobility SAPPORO **g** IFES-GCOE Regional Education and Outreach Promotion Office, Hokkaido Univ. (Contact: N.Yoshimura)
TEL: +81-(0)11-706-3355 E-mail: ynobu14001@ees.hokudai.ac.jp

Invitation to Study-Abroad Programs: SD on Campus – A Global Quality of International Campus Life



- a** In this event, the representatives of HU's overseas partner institutions will introduce their campuses to attract HU students to become their exchange students as they present their unique approaches for sustainable developments on their own campuses. These universities are known for their commitments for the creation of a quality sustainable society (i.e., sustainable development) as they pursue to establish a global quality of life for the future. They will be introducing their prized research and education programs. The event should be very inspirational for those who are interested in studying abroad, wishing to work overseas after graduation, or simply interested in SD in other universities. So, don't miss it!
- b** Hokkaido University Conference Hall **c** Japanese / English **d** Not-required (Charge: free)
e Hokkaido University Office of International Affairs
g Division of International Services, Office of International Affairs, Hokkaido University (Contact: K.Kono) TEL: +81-(0)11-706-2182 E-mail: ryugaku@academic.hokudai.ac.jp

Sustainable Campus Tour



- a** The Sustainable Campus Tour is aimed at introducing our initiatives to reduce the environmental impact of Hokkaido University's Sapporo Campus. We will take tour participants around a biogas production facility, a composting facility and pellet boiler in Field Science Center for Northern Biosphere, and several facilities at the Graduate School of Environmental Science. Hokkaido University is striving to establish a sustainable campus, and has already inaugurated several facilities as the first step towards achieving this goal. To further reduce our environmental load and CO2 emissions, we will open these facilities to all and offer a forum for an exchange of ideas between the general public, researchers and students. We hope that many participants, including students who are interested in working toward environmental conservation, will join us.
- b** 1F Lecture Room, Field Science Center for Northern Biosphere, Hokkaido University
c Japanese / English **d** Required (Charge: free) Please register via website by Oct. 24.
e Center for Sustainability Science, Hokkaido University **f** Hokkaido University Sustainable Low-Carbon Society Project, Field Science Center for Northern Biosphere
g Center for Sustainability Science, Hokkaido University (Contact: N.Tsuji)
TEL: +81-(0)11-706-4533 FAX: +81-(0)11-706-4534 E-mail: n-tsuji@spp.hokudai.ac.jp

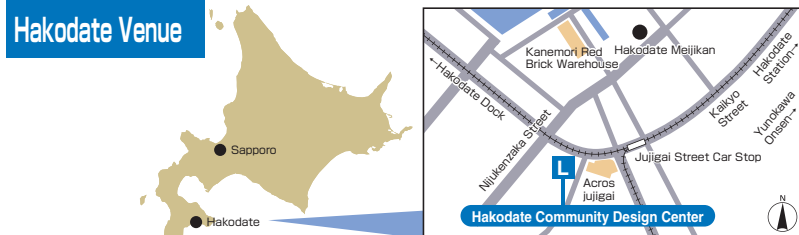
First Sustainable Campus Contest

Candle Night!
Oct.26



- a** In this contest, Hokkaido University's campus will be considered as a microcosm of a sustainable society, and students will present their ideas for an ideal campus in either Japanese or English. Awards will be presented to those with the most outstanding concepts. Undergraduates and graduates wishing to enter the contest should download application forms from the website and submit them no later than October 8. We look forward to entries capitalizing on the free, unrestrained thinking of students and their research activities and to the participation of anybody interested in the environment and sustainable campuses.
- b** Hokkaido University Conference Hall **c** Japanese / English **d** Not-required (Charge: free) **e** The Students Council for Sustainable Development in Hokkaido University
f Hokkaido University Public Policy School, Sustainable Low-Carbon Society Project
g The Students Council for Sustainable Development in Hokkaido University (Contact: T. Okabe) TEL: +81-(0)80-5103-2733 E-mail: scsd-hokudai-info@freeml.com

Map of Venues



A Conference Hall 2 Sep.25(Sat.) 3 Oct.22(Fri.) 4 Oct.24(Sun.) 28 Oct.24(Sun.)-29(Fri.) Oct.31(Sun.)-5(Fri.) 1 Oct.25(Mon.)-26(Tue.) 35 Oct.27(Wed.) 17 Oct.30(Sat.) 37 Oct.27(Wed.) 6 Nov.1(Mon.) 21 Nov.3(Wed.)-5(Fri.) 15 Oct.28(Thu.) 18 Nov.1(Mon.) 22 Nov.4(Thu.) 16 Oct.29(Fri.) 7 Nov.2(Tue.) 10 Nov.6(Sat.) 31 Oct.29(Fri.) 8 Nov.3(Wed.) 11 Nov.6(Sat.) 5 Oct.30(Sat.) 20 Nov.3(Wed.) 25 Nov.15(Mon.)	
B Hokkaido Univ. Co-op Building 29 Oct.25(Mon.)-Nov.6(Sat.) *Closed on Oct.31(Sun.)	
C Clark Memorial Student Center 32 Oct.29(Fri.)-Nov.3(Wed.) 33 Nov.6(Sat.)	
D Graduate School of Environmental Science 23 Nov.5(Fri.)	
E Center for Experimental Research in Social Sciences 27 Oct.16(Sat.) 12 Nov.7(Sun.)	
F The Hokkaido University Museum 30 Oct.26(Tue.)-31(Sun.) Nov.2(Tue.)-3(Wed.)	
G Field Science Center for Northern Biosphere 36 Oct.27(Wed.)	
H Graduate School of Health Science 9 Nov.3(Wed.)	
I Graduate School of Information Science and Technology 14 Oct.25(Mon.)	
J Slavic Research Center 19 Nov.1(Mon.)-2(Tue.)	
K Sapporo 55 Bldg.1F Inner Garden (Books Kinokuniya Main Entrance) North5. West5, Sapporo 13 Oct.13(Wed.)-15(Fri.)	
L Hakodate Community Design Center 24 Nov.9(Tue.)	

Secretariat for Sustainability Weeks 2010
Hokkaido University Office of International Affairs

Address: North 8, West 5, Kita-ku, Sapporo, Hokkaido, 060-0808, Japan
TEL: +81-(0)11-706-2093 FAX: +81-(0)11-706-2095 E-mail:office1@sustain.hokudai.ac.jp

For more information, please visit our website:

<http://www.sustain.hokudai.ac.jp/sw/>

Greeting from the President

Since its foundation as Sapporo Agricultural College in 1876, Hokkaido University has contributed to the creation of a society in which people live in harmony with nature. Since the beginning of the 21st century, we have broadened our outlook and set the goal of achieving a sustainable society through research and education in pursuit of relationships involving harmony among the environment, society, the economy, and individuals.

In 2008, we hosted the G8 University Summit in Sapporo and adopted the Sapporo Sustainability Declaration with 20 overseas universities, 14 Japanese institutions, and the United Nations University and pledged to act as a driving force behind the realization of such a sustainable society.

Hokkaido University hosted the Sustainability Weeks again in 2010 to reconfirm our commitment.

The theme of this year's Weeks – the fourth in the series – was Toward a Society Offering Quality of Life and Human Dignity for All. Over 10,000 people participated in the symposiums, lectures, workshops, and exhibitions we planned and engaged in discourse with researchers from around the world as well as with students and members of the general public for the sake of a better future.



Hiroshi Saeki, President of
Hokkaido University

Hiroshi Saeki
President
Hokkaido University

Hokkaido University Sustainability Weeks 2010

Report



For our well-being
Toward a Sustainable Society



HOKKAIDO UNIVERSITY

Report on Sustainability Weeks 2010

For our Well-being – Toward a Sustainable Society



The Sustainability Weeks project is hosted by Hokkaido University with the aim of promoting research and education to help create a sustainable society. The first session was organized in 2007, and it has since been held every year with the involvement of the entire university. The year 2010 marked the fourth anniversary of the event. It is hoped that the coming together of researchers, educators, students and members of the general public from Japan and overseas to share and discuss the latest scientific matters will help to illuminate a path toward a better future.

Sustainability Weeks 2010 by the Numbers

October 25 – November 7, 2010

Number of events:

47

38 events during the Sustainability Weeks period

5 pre-events

4 post-events

(incl. 4 hosted by students and 3 collaboratively run by students and faculty members)

**Hokkaido University
Sustainability Research Poster Contest**

Number of participants:

93

2 undergraduate students

42 students in master's degree programs

49 students in doctoral degree programs

Number of judges: 141 (80 students 61 faculty members)

Number of website visitors: **29,148**

(April 1 – November 29, 2010)

Number of participants:

11,196

(incl. 267 from overseas)

Number of events jointly held
with partner institutions:

5

(9 institutions)

China: Zhejiang University

Indonesia: University of Palangka Raya, Universitas Gadjah Mada

South Korea: Seoul National University, Pukyong National University

Malaysia: Universiti Sains Malaysia

Switzerland: University of Geneva

Thailand: Asian Institute of Technology

USA: University of Alaska

Number of participants from partner institutions:

31

(25 institutions in 15 countries)

The Sustainability Weeks 2011 event is scheduled for a two-week period from Monday October 24, 2011.

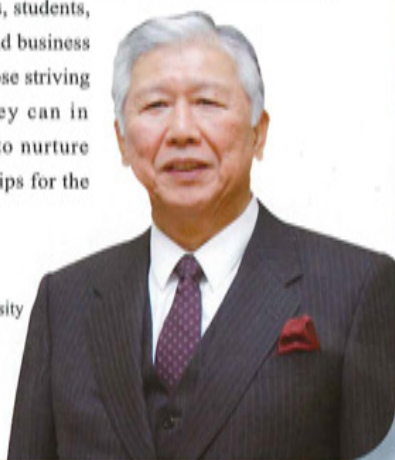
For more information:

Sustainability
Weeks 2010

<http://www.sustain.hokudai.ac.jp/sw/events/2010/>

Collaboration is essential in tackling global problems that defy resolution by single states or regions acting alone. We at HU host the Sustainability Weeks program to provide a platform for cooperation among people around the world. We aim to discuss possible solutions to these problems with increasing numbers of researchers, students, community activists and business people – essentially those striving to do everything they can in various fields – and to nurture cooperative relationships for the future.

Hiroshi Saeki
President, Hokkaido University



As part of efforts to build a sustainable society, environmentally friendly research activities are also gaining momentum in chemistry – my own field of specialization. It is important that every one of us should embrace the true spirit of sustainability.

Akira Suzuki
Nobel Laureate in Chemistry 2010
Emeritus Professor, Hokkaido University



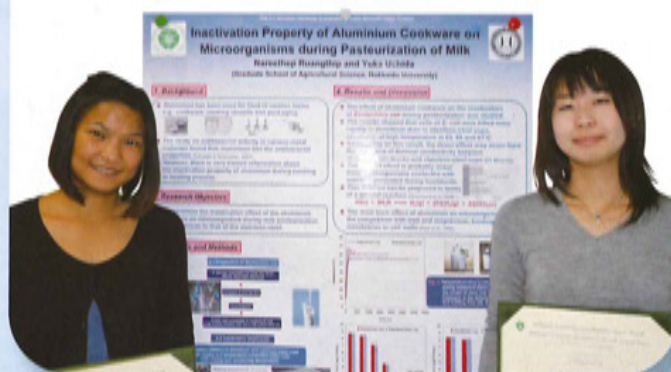
I see social sustainability as the creation of a society in which people can live rich and full lives. To achieve this, it is important to open up paths to new horizons through the strength of science while changing the way people think. It is a great honor for me to help support HU researchers in various fields by drawing on my many years of experience as a TV anchor. I believe that HU will have achieved true success in its initiatives when the term sustainability enters common parlance.

Noriyuki Sato
TV anchor
Visiting professor, Hokkaido University
Creative Research Institution Sousei (CRIS)



We entered the Sustainability Research Poster Contest because we saw it as a great opportunity to learn about sustainability, which we were already interested in. From the viewpoint of agriculture and our studies, a sustainable society is one in which a certain level of food production can be maintained. This contest helped us realize the importance of communicating this viewpoint to the public, and we also felt the need to broaden our own horizons as far as agriculture is concerned. We are very pleased that the presentation on which we worked so hard beyond national boundaries was recognized with this prestigious award.

Yuka Uchida
Nareethep Ruangship
Hokkaido University President's Award (Grand Prix) winners
at the 2nd Hokkaido University Sustainability Research Poster Contest



When I drove a Velotaxi cycle rickshaw bearing advertising for the Sustainability Weeks event across Sapporo and around the campus, lots of people came to talk to me about it. Among the variety of questions they asked, many wanted to know the meaning of sustainability, and I also learned a lot by answering these questions. I realized that we ourselves have to properly understand the future of a sustainable society if we are to call on the public to think and act together to conserve and harness Hokkaido's rich natural environment.

Takumi Fujibe
Division of Environmental Science Development
Graduate School of Environmental Science, Hokkaido University

Keiko Kurita
Eco-mobility Sapporo (NPO)



The Hokkaido University Sustainability Weeks 2010

The 4th Hokkaido University Sustainability Weeks 2010 proved to be a unique week of unparalleled social contribution and international exchanges, covering a wider range of disciplines and tackling more challenges than in previous years and is now a signature event of Hokkaido University.

The main theme for 2010 was *Toward a Society Offering Quality of Life and Human Dignity for All*. The two week period from October 25 to November 7 involved 47 sessions including pre- and post-events.

Sustainability Weeks 2010 Opening Symposium

OCT 25 Mon - OCT 26 Tue

Sustainability Weeks 2010 focused on humanity to pave the way for this event to further evolve from previous ones, which mainly dealt with the natural and social environments.

Researchers in the fields of medicine, natural science, the humanities and social science gathered to comprehensively explore and discuss the causes of issues that prevent people from achieving physical, mental and social well-being that would assure a high quality of life. The symposium started with a keynote lecture by Keith F. Taylor, Associate Vice-President Academic Outreach and International Programs, Dalhousie University in Canada, an institution that was recently added to the list of Hokkaido University's partner institutions.

Discussions on the first day were held from the viewpoints of health, the environment, social policy and citizens' activities, and the second day highlighted children, ecosystems, the water crisis and the aging society with falling birthrates. The symposium provided us with an opportunity to comprehensively confirm once again beyond academic disciplines that the health and lifestyle of an individual are affected by the structure of society and the natural environment, and that human activities have an influence on these matters.



Public Lecture: Let's Think Together! Our Environment and Children's Health

Researchers outlined to members of the general public the results of their research on the effects of natural and social environments on fetuses and children. The audience showed particular interest in the fact that results of a long-term epidemiological study entitled the *Hokkaido Study on the Environment and Children's Health* by Hokkaido University researchers led to the Japan Eco & Child Study to be launched in 2011 by the Ministry of the Environment of Japan involving some 100,000 mothers and children. The audience asked many questions, including those concerning the future plans of the Hokkaido University's Center for Environmental and Health Sciences (CEHS), which acts as the Hokkaido hub for this nationwide study, followed by lively discussions.

International Symposium on Child Poverty and Anti-poverty Strategy

NOV 6 Sat

Researchers from Japan and the UK outlined the present status and challenges of studies that are conducted in the two countries to grasp the state of child poverty and eliminate it. They also illustrated related citizens' activities and policy development, and held discussions involving the audience. The discussions centered on the need to re-examine the concept of child poverty itself and on strategic issues involving consensus building in society. This was the first international symposium on child poverty ever to be held in Japan and was significant because major issues related to future research and practical activities were made clear, and the event paved the way for the continuation of international research.



Events and Activities

📍 Organizer 📍 Co-host

- Sep 25 (Sat.) **Public Lecture: Fertility and Sustainable Future**
📍 Hokkaido University (HU) 📍 University of Geneva
- Oct 13 (Wed.) **Science Café: "Shirabekata" on Earth Vol.1- Vol.3**
- 15 (Fri.) 📍 Executive Committee of "Shirabekata" on Earth
📍 IFES-GCOE Regional Education and Outreach Promotion Office, HU
- Oct 16 (Sat.) **The 7th Debate Competition**
📍 School of Economics and Business Administration, HU
- Oct 22 (Fri.) **Hokkaido University Sustainability Forum**
📍 Hokkaido University 📍 The Hokkaido Shimbun Press
- Oct 24 (Sun.) **Public Lecture Commemorating the Establishment of the Hokkaido University Center for Environmental and Health Sciences: Let's Think Together! Our Environment and Children's Health**
📍 Center for Environmental and Health Sciences, HU
- Oct 24 (Sun.) **The 2nd Sustainability Research Poster Contest I**
- 29 (Fri.) 📍 Hokkaido University

- Oct 25 (Mon.) **Special Event: Ride and Think for Sustainability in Hokkaido Univ.**
- 31 (Sun.) 📍 IFES-GCOE Regional Education and Outreach Promotion Office, HU
📍 EcoMobility SAPPORO (NPO)
- Oct 25 (Mon.) **SW2010 Opening Event:**
- 26 (Tue.) *Toward a Society Offering Quality of Life and Human Dignity for All - Comprehensive Exploration Into the Causes of the Crises We Face-*
📍 Hokkaido University
- Oct 25 (Mon.) **Int'l Workshop on Green Circuits and Systems**
📍 Center for Next-Generation Information Technology based on Knowledge Discovery and Knowledge Federation, HU
📍 Graduate School of Information Science and Technology, HU
- Oct 25 (Mon.) **Fair Trade Fair Vol.5**
- Nov 6 (Sat.) 📍 International cooperation student association "yui" 📍 Hokkaido Univ. Co-op
- Oct 26 (Tue.) **Controlling Zoonoses: An Experimental Exhibition on Integrative Science**
- Nov 3 (Wed.) 📍 The Hokkaido University Museum
📍 Global COE Program "Establishment of International Collaboration Centers for Zoonosis Control"; Hokudai Integrated Science Consortium; Hokkaido University Research Center for Zoonosis Control

Students who firmly believe that the imagination and creativity of students will change Hokkaido University, and who made it their goal to create a global model of campus sustainability here, formed a group called Students Council for Sustainable Development (SCSD). They held a contest calling for project ideas to achieve this goal among the students and awarded prizes for excellent ideas. During this inaugural contest, seven unique project concepts were submitted, and the venue where the presentations were held was enlivened with the passionate appeals of the presenters and the insightful questions from the jury members. Unfortunately, nobody could meet the stringent judging criteria to receive the Grand Prix Award. However, the event was fruitful because students, faculty members and members of the general public who had a common interest in improving campus sustainability could establish a network of people who support the SCSD's activities.

The seven project concepts are as follows:

- Special Jury Award and Venue Award: Energy development system using bicycle generated power
- Special Jury Award: The establishment of an environment department
- An eco-coupling tax; a paperless university; the promotion of the Warm Biz energy conservation campaign; a fasting camp; and the creation of a social network service (SNS) focusing on sustainability science



Sustainable Campus

Our campus is a stage for social experimentation and place to develop new sustainable models.

SD on Campus – A Global Quality of International Campus Life

A seminar for Hokkaido University students who are interested in studying abroad was held by inviting the representatives of seven of the university's partner institutions that place special emphasis on fostering human resources that will contribute to the achievement of sustainable development (SD). Informed about the distinct educational environment of each of those institutions, students could picture their possible involvement in sustainable development initiatives in the classroom and beyond at these institutions. They appeared highly motivated to study abroad.

Participating institutions:

AGH University of Science and Technology (Poland), Dalhousie University (Canada), Sichuan University (China), Technische Universität München (Germany), University of Oklahoma (U.S.A.), Universiti Sains Malaysia, and Yonsei University (South Korea).



Nov 4 (Thu.) Business-Academia-Government Collaboration Seminar on Developments of Geo-spatial Information and Future World II

- ① Hokkaido University Graduate School of Letters; GIS Association of Japan Hokkaido Regional Office; Hokkaido GIS/GPS Society; Digital Hokkaido (NPO)

Nov 5 (Fri.) Hokkaido Marine Bioscience Symposium

- ① Hokkaido Marine Bioscience Society; IFES-GCOE, HU

Nov 6 (Sat.) The 14th Ainu Language Speech Contest "ITAK AN RO"

- ① The Foundation for Research and Promotion of Ainu Culture
- ② Center for Ainu & Indigenous Studies, HU

Nov 6 (Sat.) Int'l Symposium on Child Poverty and Anti-poverty Strategy

- ① Graduate School of Education, HU
- ② Society for the Study of Poverty

Nov 6 (Sat.) Int'l Symposium on "Reproductive Rights and The Sustainability of Women's Health in Historical and Contemporary Perspectives"

- ① Center for Applied Ethics and Philosophy, HU

Nov 7 (Sun.) Special Lecture "Intergenerational Justice and Health in an Aging Society"

- ① Center for Applied Ethics and Philosophy, HU

Nov 9 (Tue.) Public Lecture: Theory and Practice of Fisheries Sustainability Science

- ① Faculty of Fisheries Sciences, HU
- ② Science Council of Japan; Hakodate City

Nov 15 (Mon.) SCJ Hokkaido District Conference "Green Innovations Originating in Hokkaido"

- ① Hokkaido District Conference, Science Council of Japan; Hokkaido University

Dec 7 (Tue.) Fishing Down and Fisheries Sustainability Science

- ① International Exchange Committee in the Faculty of Fisheries

Dec 8 (Wed.) JSPS Core University Program Seminar "Proposal for Sustainable Fisheries"

- ① Hokkaido University; Pukyong National University
- ② Japan Society for Promotion of Science; Korea Research Foundation

Future Activities of Hokkaido University

Hokkaido University focuses on the following four initiatives to fulfill the pledges outlined in the Sapporo Sustainability Declaration (SSD) adopted by the presidents of 35 major universities around the world here in Sapporo, Hokkaido in 2008.

1 Hosting Sustainability Weeks programs

Universities, being neutral and objective, are best suited to inform political and social change toward a sustainable society. Each year, Hokkaido University hosts a two-week Sustainability Weeks program to offer a platform for exchanges among specialists from academia, educational institutions, business communities, governments and NGOs, as well as students and members of the general public. They gather from all over the world to learn about problems shared by the human race as a whole, and discuss possible solutions. Ideas and plans for the forthcoming Sustainability Weeks program in its fifth year, slated for October 24, 2011, are now being gathered from across the world.

2 Establishing a Sustainable Campus

Hokkaido University views the Sapporo Campus, which is nestled in the middle of a city with a population of 1.9 million, as an experimental field, and have established the Office of Campus Sustainability in November 2010 to promote our initiative to create a new model for a sustainable society. We combine the results of our cutting-edge research with vitality of our students to create a miniature society that is sustainable in every aspect, including study, research, operation and daily life.

3 Foster Emerging Talent to Lead a Sustainable Future

Hokkaido University has placed special emphasis on fostering global perspectives in our students to help them develop the knowledge, skills and behavioral patterns that are essential for building the next generation and to expand their networks with those who share the same ideals around the world. To this end, we have increased the number of summer programs we jointly host with our partner institutions as well as the number of students we send to international conferences. The center for Sustainability Science initiates the promotion of joint classes connecting Hokkaido University with the partner institutions via the internet.

4 Leading the Sustainability Network

Collaboration is essential when we tackle problems that defy solutions by single states or regions acting alone. Hokkaido University will continue to exercise leadership to build networks with other organizations within Japan and overseas. Currently, as a board member of the network for the Promotion of Sustainability in Postgraduate Education and Research Network (ProSPER.Net), Hokkaido University organizes the Alternative University Appraisal Project (AUA) to provide resources to universities in Asia-Pacific which reveals the contribution of universities towards the achievement of sustainability.

▼ Sustainability Weeks



<http://www.sustain.hokudai.ac.jp/sw>

▼ Office for a Sustainable Campus



<http://www.hokudai.ac.jp/bureau/news/news-top/campus-sustainability/cs.html>

▼ Center for Sustainability Science (CENSUS)



<http://foxsus.census.hokudai.ac.jp/strass/>

▼ Alternative University Appraisal Project (AUA)



<http://www.sustain.hokudai.ac.jp/aua>

Secretariat for Sustainability Weeks

Hokkaido University Office of International Affairs

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TEL: +81-(0)11-706-8031 FAX: +81-(0)11-706-8036 E-mail: office1@sustain.hokudai.ac.jp

<http://www.sustain.hokudai.ac.jp/sw/>



北海道新聞 サステナビリティ・ウィーク インタビュー企画
「北海道大学が考えるサステナビリティとは」

第一回 2010年9月22日（水） 北海道新聞朝刊掲載

北海道大学が考える
サステナビリティとは

サステナビリティ(持続可能な社会)に対するメッセージを、
北海道大学の研究者から6回にわたってお聞きます。

シリーズ①

企画・制作／北海道新聞社広告局

人々、人間社会からもアプローチ

健康・安全・生活を
統括する、
公衆衛生学

医学の世界には、臨床医学や基礎医学に対して、社会医学という分野があります。社会医学は、予防医学と、医療のシステムなどを研究する学問に分かれ、私は予防医学の中の公衆衛生学が専門です。

公衆衛生学という言葉は、憲法25条にも記されています。「すべて国民は、健康で文化的な最低限度の生活を営む権利を有する。国は、すべての生活部面について、社会福祉、社会保障及び公衆衛生の向上及び増進に努めなければならない。」公衆衛生学とは、社会に生きる人々の健康・安全・生活を統括する科学と言えるでしょう。

例えば、働く人のメタボリック症候群という問題に対して、私たち公衆衛生学の専門家は、個々人の生活習慣に目を向けるだけでは不十分だと考えます。深夜まで残業し、帰宅してから夕食をとる生活スタイルが背景にあるならば、労働環境の改善も検討します。そのためには、医師だけでなく、

第二回 2010年10月2日（土） 北海道新聞朝刊掲載

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シリーズ②

企画・制作／北海道新聞社広告局

ウェル・ビーイングの視点から迫る

持続可能な社会の
実現に向けて

北海道大学では、創立以来多くの研究者が世界中の自然を相手に調査や観測を行ってきました。地球環境の変化を示すデータを見るにつけ、人類は果たして持続可能だろうかという問題意識が生まれ、全学を挙げてこの問題に取り組もうと、2007年、「サステナビリティー・ウィーク」をスタートしました。「北海道洞爺湖サミット」が開催された08年には、国内外の大学や国連大学と「G8大学サミット」を開催し、持続可能な社会の実現に向けた「札幌サステナビリティー宣言」を採択しました。昨年は①感染症の拡大阻止②水源の枯渇回避③食料とエネルギーの確保④低炭素・循環型社会の構築⑤東アジアの生命線であるオホーツク海とその流域の持続可能な開発といった喫緊の5課題について、北海道大学の研究者が国際社会に対し提言をしました。

健康・安全・生活を
統括する、
公衆衛生学

過去3回の「サステナビ

リティ・ウィーク」は、主に自然環境や社会システムの側面から、持続可能な社会のあり方を検討してきました。今年は新たなアングルを持ち込もうと、人間にスポットを当て、『ひとり一人がすこやかに人間らしく生きる社会を目指して』をテーマに掲げます。

一人一人が身体的、精神的、社会的に良好な状態(ウェル・ビーイング)で、質の高い生活(クオリティー・オブ・ライフ)を送る世界は、あるべき持続可能な社会の姿です。ウェル・ビーイングとは、「GDP(国内総生産)以外に、国の豊かさや国民の幸せを示す指標を持ってないか」という、最近盛んに行われている議論の中で注目されている概念です。一人一人の健康や生活は、社会の仕組みや自然環境の影響を受け、逆に、人間の活動はそれらに影響を与えます。このような視点を皆さんと共有していきたいの思いから、今年のオープニングシンポジウムは、健康、貧困、高齢社会を切り口にしました。

地球規模の課題に取り組む際は、国と国との利害

がぶつかり、物事が容易に進まないことが多々あります。しかし、研究者同士、あるいは市民も交えて、課題に対する価値観を共有することが国の利害を超えて解決に向かう第一歩だと思います。

この「サステナビリティー・ウィーク」が、子や孫のさらに先の世代へ、より良い地球環境、より良い社会を手渡していくために共に考え、語り合う場になればと願っています。多くの市民の皆さんのご参加をお待ちしています。



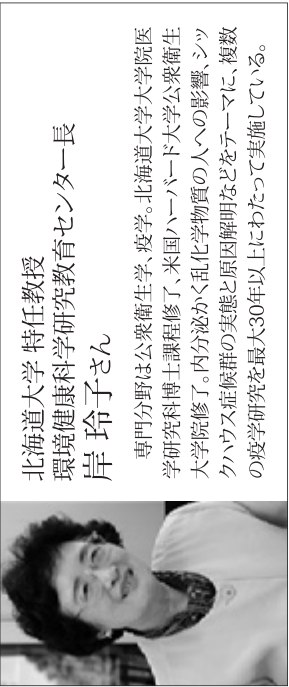
北海道大学理事・副学長、教授、工学博士
サステナビリティ・ウィーク2010実行委員長
本堂 武夫さん

専門分野は応用物性・結晶工学など。北海道大学工学部卒業。同大学院修士課程修了。極地の氷床研究の第一人者で、第35次南極観測隊(夏隊)に参加。「氷とクラスレートハイドレート」の物性と氷床研究への応用」などの研究で知られる。日本物理学会、国際雪氷学会などに所属。07年、理事・副学長に就任。

北海道新聞

学問の融合が求められる公衆衛生学を専門とする私が長を務めることが、学部を横断した取り組みを推進するきっかけになればと願っています。

当センターでは、環境省から委託を受けて、医学研究科、教育学研究院保健科学研究院さらには道内の医科大学などと連携して、全国規模の研究子ども健康と環境に関する全国調査を行っています。今後も、北海道大学内外の多くの研究者とともに、人々の生活の質の向上に向けて、研究に取り組んでいきたいと考えています。



北海道大学 特任教授
環境健康科学研究教育センター長
岸 玲子さん

専門分野は公衆衛生学、疫学。北海道大学大学院医学研究院博士課程修了。米国ハーバード大学公衆衛生大学院院修了。内分泌かく乱化学物質の人への影響、シツケハウイルス症候群の実態と原因解明などをテーマに、複数の疫学研究を最大30年以上にわたって実施している。

労働に関する法律や経済の専門家とも協力していきます。

現代社会における健康問題を根本的に解決するには、大きな枠組み、長期的な視野での取り組みが必要です。さらに、単に一人の人を救うということではなく、社会全体が良い方向に向かうよう導く研究が求められていると思います。

人々や人間社会の
あり様からの
アプローチ

あらゆる環境が人々の健康と安全・生活に与える影響が多大で、かつ、健康障害を引き起こすリスクが胎児から高齢者にまで及んでいます。

北海道大学が重要課題として、全学的活動を進めているサステナビリティ(持続可能な社会)には、地球温暖化、水、大気汚染など自然環境面からのアプローチだけではなく、人々や人間社会のあり様からのアプローチがますます重要になつてくるでしょう。

今春、北海道大学に環境健康科学研究教育センターが設立されました。多様な



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北海道大学の研究者から6回にわたってお聞きます。

シリーズ ③

海の生態系を守り、次世代に食料を

将来にわたって人類が生き残るには、食料の確保と、そのための海の生態系の保全が必要です。このような趣旨の議論や研究を行う際、これまでは産業としての漁業を軸に据えてきました。しかし、それでは「食」は守れませんでした。利益の追求により、乱獲が進み、魚はどんどん減少してしまいました。いま大切なことは、次世代の食料を守るにはどのような海洋生態系が必要かというアプローチだと、私は考えています。

海洋生態系のピラミッドは、下から植物・動物プランクトン、小魚の階層(栄養段階)があり、トップにはサケ、マグロ、サメなどの大型の魚がいます。ケルメ志向の高まりもあり、近年、人類はピラミッドのトップに位置する魚を大量に捕ってきました。その結果大西洋のクロマグロや一部のサメは絶滅危惧(きぐ)種に指定されるまでになりました。

トップの魚が少なくなると、その下の階層の小魚は食べられることがなくなるので数が増える一方、小魚

海洋生態系の
ピラミッドに異変

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シリーズ ④

消費エネルギーを抑える技術の開発は急務

現在、世界中の端末数は約10億台で、年間約12%の割合で増加しています。単純計算では2015年には端末数が今の10倍になり、これらの消費電力は合計45テラワット※、地球が持つ地熱を含む総エネルギーに匹敵します。

温暖化対策では、太陽光や風力発電などどうやってCO₂排出量を削減してエネルギーを生み出すかという話になりがちですが、それではエネルギー量を減らす答えにはなりません。そもそも、家電製品や端末などの消費エネルギーを抑えることが必要ではないでしょうか。

最近のノートパソコンは昔のものより熱くなりやすいと思いませんか。すぐに熱くなり、ひざの上に1時間も載せられない。これは消費エネルギーの増加を意味します。つまり、小型で高性能になりはしたが、消費エネルギーも増えてしまった。持続可能な社会の実現には、人々が求めるより快適な機能を満たしながら、消費エ

情報端末の
消費電力量は
地球が持つ
総エネルギー並に

ネルギーを格段に抑える技術の開発が求められます。

エネルギー消費が少なく、より良いものを求めて

このような消費エネルギーを抑えた回路やシステムを「グリーン・サーキット・アンド・システムズ」と呼び、近年研究者の間では大きな話題となっています。私たちの研究室でも音声対話ができるロボットと無線通信システムを開発しています。ロボットに搭載する音声認識チップは極低消費電力化に成功し、企業が製品として販売しています。無線通信システムは、最新の規格の倍、600Mbps※の速度で消費電力を4分の1に抑えることには成功しました。次は消費電力を変えずに通信速度を3Gbps※にまで上げることを目指しています。

昨今、大手のインターネット検索エンジン運営会社では、スーパーコンピュータ1台に代えて複数のパソコンを使って同じ作業をさせる、いわゆるグリッド・コンピューティングがトータルでの消費電力が少なく済むということを言っており、低炭素



北海道大学 大学院
情報科学研究科教授、工学博士
宮永 喜一さん

専門分野は音声情報処理、無線通信システム、LSI設計技術。北海道大学工学部卒業後、1990年から同大学で研究・教育を行う。「拡張ロバスト音声認識システム」の極低消費電力型LSI設計に関する研究で知られ、企業の受託研究多数。2008年、ILSI IPデザインアワードを受賞。電子情報通信学会、IEEEなどに所属。

※ 1テラワット(TW)=1×10¹²ワット(W)のこと。 ※Mbps、Gbpsとは、通信速度の単位。1つ。1Mbpsは1秒間に100万(=10の6乗)ビットのデータを送れることを表す。

エコベルから、養殖から、
海の問題を考える

11月9日の講座では、市民の方々と問題意識を共有するために、多様な話題を用意します。その一つが、エコベルです。例えば、アメリカ西海岸で使われているエコベルは、緑・赤・黄の順に、食べてよい魚から食べない魚までを分類しています。サケでいうと、アラスカの野生のサケは量も十分に管理も良いので、緑、大西洋で養殖されたサケはPCBやダイオキシンなどの残留数値が高いので赤というように、単一魚種でも産地や養殖場ごとに識別します。食料として安全で、環境や生態系に優しく、フレンドリーな漁業や養殖が行われているものを食べなさいという啓蒙(けいも)という実践が目的です。

今や地球上で食べられている水産物の約半分を占める養殖にも焦点を当てます。養殖には、魚に与える餌の半分が海中に沈むことに



北海道大学 大学院水産科学研究
水圏生態系保全学講座教授
山本 雅秀さん

専門分野は魚類生態学、水圏保全生態学。北海道大学水産学部卒業後、水産庁勤務中に水産学博士号を取得。アラスカ大学フェアバンクス校客員教授などを経て、05年から現職。「亜寒帯水圏生態系キーストン種サケ属魚類の生態系サービスとリスク管理」ほか研究実績多数。日本水産学会、アメリカ水産学会などに所属。

よる汚染、餌に魚粉を用いることによる生態系の切断などの問題が潜んでいるからです。このほか、フードマイレージ、食料トレーサビリティなどについても、専門家が分かりやすく解説します。

また、12月7日には、生き物の減少が海の砂漠化につながると世界に警鐘を鳴らしているフリアティツェ・ゴロンビア大学漁業センター所長ダニエル・ポーリー氏が北大水産学部(函館)で特別講義を行います。海の生態系を守ることの大切さを理解し、あう場になればと願っています。



北海道新聞 サステナビリティ・ウィーク インタビュー企画
「北海道大学が考えるサステナビリティとは」

第五回 2010年10月18日（月） 北海道新聞朝刊掲載

北海道大学が考える
サステナビリティとは

サステナビリティ(持続可能な社会)に対するメッセージを、
北海道大学の研究者から6回にわたってお聞きます。

シリーズ⑤

企画・制作／北海道新聞社広告局

“知の統合”がサステナビリティを実現

近年、学問の世界は高度に
なつた半面、細分化が進み、一
人の研究者では解明できない
問題が増えています。この現
状を何とかできないかと、昨
年、有志によって「北大統合科
学コンソーシアム」を設立し
ました。その趣旨は、拡散・細
分化した多様な分野の研究
を再び収束させて、知の統合
を目指すもので、さまざまな
研究からみて中立的な立場
にある総合博物館をプラットフォームにしています。

同コンソーシアム設立の
きっかけは、08年に同博物
館で行われた展示「洞爺湖・
有珠火山地域の環境と資源」
です。有珠火山噴火に伴つて、洞爺湖・有珠火山
地域の環境と資源がどのよ
うに変化し、どのように人
間生活に影響を与えたかに
ついて生態系・水環境・地質
と資源・環境・鳥類生態・植
生・昆虫・人類遺跡そして社
会学など、さまざまな研究
分野から多角的にとらえた
展示を行いました。研究の
結果を重ね合わせていくこ
とで、問題の解決策や新し
い問題点が見えてきました。

地球上の問題が複雑化、

複雑化、多様化する
問題に“知の統合”を

多様化する中、サステナビ
リティ(持続可能な社会)を
実現するには、統合科学と
いう学問、そして考え方、行
動が必須といえるでしょう。

統合科学としての
人獣共通感染症研究

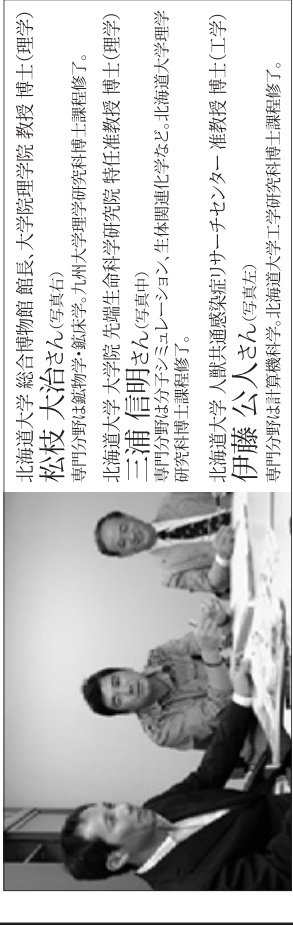
今年の「サステナビリティ・
ウィーク」では、総合博物館
内でインフルエンザやエボ
ラ出血熱といった人獣共通
感染症をテーマにした展示
を行います。

人獣共通感染症は、北海
道大学がその研究において
世界に誇る分野の一つです。
また、05年に設立された人
獣共通感染症リサーチセン
ターでは、医学・獣医学・薬学・
農学・理学・情報科学などの
研究者が集まり、“知の統合”
を実践しています。統合科学
という新しい学問のあり方
を知っていただくには、人獣共
通感染症は、最も分かりや
すいテーマだと考えられます。

プログラムは、人獣共通
感染症の解説、ウイルスが感
染した細胞の顕微鏡観察、
人獣共通感染症の病原体を
媒介する昆虫などの標本展
示、研究室で使われる最新
機器を用いた実験体験や防
護服の試着など、子供から

大人まで興味の持てる内容
です。アンケートに協力い
ただいた来場者には、ウイル
スを模した特製携帯ストラ
ップを差し上げます。

また、10月31日にはイン
フルエンザ研究の世界的な
権威で、日本学士院賞を受
賞している喜田宏教授が講
演を行います。北海道大学
が考えるサステナビリティの
一端に触れられる好機だと
思いますので、興味のある
方はお問い合せください。



北海道大学 総合博物館 館長、大学院理学院 教授 博士(理学)
松枝 大治さん(写真右)
専門分野は動物学・鉱床学。九州大学理学研究科博士課程修了。
北海道大学 大学院 先端生命科学研究所 特任准教授 博士(理学)
三浦 信明さん(写真中)
専門分野は分子シミュレーション・生体関連化学など。北海道大学理学
研究科博士課程修了。
北海道大学 人獣共通感染症リサーチセンター 准教授 博士(工学)
伊藤 公人さん(写真左)
専門分野は計算機科学。北海道大学工学研究科博士課程修了。

第六回 2010年10月21日（金） 北海道新聞朝刊掲載

北海道大学が考える
サステナビリティとは

サステナビリティ(持続可能な社会)に対するメッセージを、
北海道大学の研究者から6回にわたってお聞きます。

シリーズ⑥

企画・制作／北海道新聞社広告局

再生可能エネルギーがパラダイムを変える

経済とは、中国の古典に
ある『経世済民』が語源で、
社会を長期的に治め、人々
に良い生活をもたらすこと
を意味します。この概念を現
代に当てはめれば、地球温
暖化問題も持続可能な発
展という話題も、経済分野
で語るべき題材といえます。

サステナビリティ(持続
可能な社会)とは、現状維
持ではなく、現状を変えな
ければ実現できません。物
事を発想するに当たって、
この前提に立つことが非常
に重要です。従来の方法論
の藩壁では、財政から資源・
エネルギー、廃棄物まで、問
題の解決を図ることは困難
であり、私たちの生活も地
球も破綻しかねません。

今夏の猛暑を振り返って
も、地球温暖化対策が喫緊
の課題であることは明らか
です。国内の温室効果ガス
排出量を20年までに90年比
25%削減するという政府の
目標を達成するために重
要なキ―を握っているのは、
再生可能エネルギーです。
これは太陽光や風力・バイ
オマス(原料・燃料として利用
できる生物起源の有機物。

木くず、動物のふん尿、生ご
み等)などを用いる地球環
境に優しいエネルギーです。

地球にも地域にも
良い影響を

経済産業省は、再生可能
エネルギーで発電した電気を
電力会社が全量買い取り、
その費用を電気料金に上
乗せする制度の具体策をま
とめました。この政策が実現
されれば、国民全員が再生
可能エネルギーの開発・活
用に係る負担を広く薄く担
い、国民全員がこれに投資す
ることになります。現在、日
本では、再生可能エネルギー
は電力全体の1%以下です
が、全量買取制度を導入し
たデンマークでは20%以上、
ドイツでは15%以上を占め、
政策効果は実証済みです。

北海道は、再生可能エネ
ルギーの宝庫です。主要産
業である酪農・漁業・林業は
バイオマスと直結します。ま
た、風力でいえば、先駆の稚
内市や苫前町では、市町内
の風力発電機の発電量は、
市町内で必要な電力の7割
近くに及んでいます。また、
再生可能エネルギーの開発・
活用は、諸外国の例を見れ
ば、リターンした技術者が

機器の維持管理を行う、新
たな環境関連ビジネスを
起こすなど、地域経済にも
良い影響を与えます。諸外
国は再生可能エネルギー
の普及を、新たなビジネスの
チャンスととらえています。

再生可能エネルギーを
使い、地域経済と雇用を興
すというパラダイムは、北
海道の将来にとっても非常
に有益でしょう。130年
前、北海道の開拓・開発の
ために設立された北海道
大学は、開学の精神・使命
を21世紀に受け継ぐ意味
からも、このような動きの
推進役を務めていくべき
だと考えます。



北海道大学 大学院
経済学研究科教授、経済学博士
吉田 文和さん
専門分野は環境経済学、産業技術論、循環型社会の
経済学的分析。京都大学大学院経済学研究科博士課
程修了。「国際共同研究」循環型社会の経済分析、ITと環
境問題」を進める傍ら、放送大学講師を務め、『IT汚染』
(岩波新書)を著すなど幅広く活躍。環境経済・政策学
会、日本環境学会などに所属。



北海道大学の前身・札幌農学校として創基135年、北海道という風土に育まれ、そして多くの道民の皆様に支えられ、北海道大学は今日まで歩み続けてきました。クラーク博士が開校式で唱えた“lofty ambition”（高邁なる大志）。これを端緒とするフロンティア精神により勝ち得たこのたびの栄誉は、今こそ北海道の皆様とともに分かち合うべきものと考えます。北海道大学はこの日を忘れずに、これからも北海道とともに、日本そして世界をリードする研究・教育に努めます。

鈴木 章 先生 研究の足跡

鈴木先生は、主に有機合成化学や有機金属化学、触媒化学の各分野で研究業績を重ねてきました。中でも1979年に発表した、パラジウム触媒を用いる有機ホウ素化合物のクロスカップリング反応は、有機合成化学のみならず触媒化学や材料科学など、幅広い分野に多大な影響を及ぼした研究であり、"Suzuki coupling 反応" もしくは "Suzuki-Miyaura coupling 反応"として世界的に知られています。

鈴木先生をこの研究へと導いたのは、米国・パデュー大学のハーバート・ブ라운教授（1979年ノーベル化学賞受賞、故人）でした。鈴木先生は北海道大学助教授時代の1963年から、博士研究員としてブ라운教授に師事。1965年に北海道大学に戻り、有機ホウ素化合物を使った新しい合成法の研究に精力的に取り組みました。北海道をホームグラウンドとしながら、研究者と国際的に交流することが、今日の栄誉につながったといえるでしょう。

持続可能な社会（サステナビリティ）の実現をめざし、道民とともに“行動する大学”へ

北海道大学は、1876年に設立されて以来、フロンティア精神を掲げ、自然と人間が共存する社会づくりに地域とそして世界と協力してきました。21世紀に入ってから、より視野を広げ、環境・社会・経済・個人の調和を目指し「持続可能な社会（サステナビリティ）の実現」を掲げて、研究と教育に取り組んでいます。

地球環境の劣化、水や食料の枯渇、地球温暖化などの人類の存亡に関わる問題が山積する中、「サステナビリティ」は、いまや国連をはじめとする国際社会のみならず学術分野において最も重要な課題と位置づけられています。

この人類の課題に取り組むことこそ、新しい時代の開拓者であり続ける、北海道大学の使命です。

サステナビリティを実現するには、研究者と市民、大学と企業や行政などの連携が不可欠です。北海道大学が積み重ねてきた、調査や観測、実験および分析などの“知の蓄積”を、市民や世界の研究者、そして社会を担うセクターと共有し、議論し、新しい社会を共に描こうと、2007年から毎年「サステナビリティ・ウィーク」を開催しています。また2008年には、「G8大学サミット」を札幌で開催し、海外の20大学、日本の14大学そして



国連大学と共に「札幌サステナビリティ宣言」を採択し、大学も持続可能な社会を実現するための原動力になるのだと誓い合いました。

創立以来培ってきた高邁なる大志とフロンティア精神。その志を胸に抱き40余年前アメリカへ渡った鈴木章先生。この綿々と続く精神は決して途切れることなく今につながっています。北海道大学は今までも、そしてこれからもずっと、環境・社会・経済・個人が調和する住みよい世界の実現を目指し、この北の大地で道民の皆様とともに考え、行動する大学であり続けます。



鈴木 章 先生 の 略 歴

- 1930年 鶴川村（現むかわ町）で生まれる。
- 60年 北大大学院理学研究科博士課程修了
- 61年 北大工学部合成化学工学科助教
- 62年 米国・パデュー大博士研究員（～65年）
- 73年 北大工学部応用化学科教授
- 88年 英国・ウェールズ大招聘（しよへい）教授
- 94年 北大を停年退官、北大名誉教授に。その後は、岡山理科大、倉敷芸術科学大の教授、米国・パデュー大、台湾中央科学院・台湾国立大の招聘教授を歴任
- 2009年 英国化学会名誉会員

【受賞歴】

- 日本化学会賞（89年）、有機合成化学特別賞（04年）、日本学士院賞（04年）、P・カーラーメダル（09年/スイス）、北海道新聞文化賞（09年）

北海道大学では、鈴木先生の講演会をノーベル賞授賞式の後、札幌で開催する予定です。
詳細は、開催決定後北海道大学ホームページなどで案内いたします。

■北海道大学ホームページ
http://www.hokudai.ac.jp/

