International Symposium on Sustainable Development in East Asia
Hotel Nikko New Century Beijing, Beijing, China
8 - 9 March 2007

Sponsored by:
Japan Society for the Promotion of Science (JSPS)

Cosponsored by:
Bureau of International Cooperation, Chinese Academy of Sciences (CAS)
Chinese Academy of Medical Sciences (CAMS)
National Natural Science Foundation of China (NSFC)
Department of International Cooperation, Ministry of Science and Technology of China (MOST)

Symposium Scope
The concept of “sustainable development” provides us an answer to the question how humankind coexist harmonically with the Earth and with nature. Environmental problem and economic development are closely connected, and human activity impacts on global environment across the border. Natural disasters such as tsunami and big earthquake and the spread of infectious diseases such as avian influenza threaten sustainable society. The first approach to these serious problems is investigations of the complex Earth system and ecosystem. In addition, it is essential to develop innovative technologies for energy, natural resources, food, materials, information and communication. The purpose of this symposium is to launch into a network of universities and institutions in East Asia and to promote studies contributing to sustainable development. The symposium is composed of the following six sessions.

1. Sustainable economic development in East Asia: Governance and regional cooperation
2. Global change, environment and natural disasters
3. Sustainable development of foods, bio-resources, and energy –estabishing a recycling-oriented society in East Asia
4. Asian development and emerging infectious diseases
5. Nanotechnology and new materials
6. Information technology and sustainable development
Session Conveners

Session 1: Prof. Yoshihiko Tsukuda (Graduate School of Economics, Tohoku University), tsukuda@econ.tohoku.ac.jp
Prof. Ke-young Chu (Kyung Hee University, Korea)

Session 2: Prof. Akimasa Sumi (Transdisciplinary Initiative for Global Sustainability, The University of Tokyo), sumi@ir3s.u-tokyo.ac.jp
Prof. Qing-Cun Zeng (Institute of Atmospheric Physics, Chinese Academy of Sciences), zengqc@mail.iap.ac.cn

Session 3: Prof. Mitsuru Osaki (Graduate School of Agriculture, Hokkaido University), mosaki@chem.agr.hokudai.ac.jp
Prof. Yong-Guan Zhu (Research Center for Eco-environmental Sciences, Chinese Academy of Sciences), ygzhu@mail.rees.ac.cn

Session 4: Prof. George Fu Gao (Institute of Microbiology, Chinese Academy of Sciences), gaof@im.ac.cn
Prof. Aikichi Iwamoto (Institute of Medical Science, The University of Tokyo), aikichi@ims.u-tokyo.ac.jp

Session 5: Prof. Takashi Goto (Institute for Materials Research, Tohoku University), goto@imr.tohoku.ac.jp
Prof. Pan Wei (Department of Materials Science and Engineering, Tsinghua University)

Session 6: Prof. Shinobu Yume Yamaguchi (Global Scientific Information and Computing Center, Tokyo Institute of Technology), yamaguchi@gsic.titech.ac.jp
Dr. Tiedao ZHANG (Vice President, Beijing Academy of Educational Sciences), tdzhang@bjedu.gov.cn

Session Objectives and Invited Speakers

Session 1: Sustainable Economic Development in East Asia: Governance and Regional Cooperation

The East Asian region, since the beginning of the 21st century, has been experiencing the highest economic growth among the world, and economic interdependence in terms of international trades, investments and finance has been strengthened. It is crucial to enhance economic cooperation within the region for maintaining sustainable economic development. In contrast with Europe and America, since we have serious heterogeneities in political systems, degree of economic developments, ethnicities, languages and religions, it is not easy to build a unified system of regional cooperation. This session will discuss how to promote collaborative activities on economic development in East Asia from the viewpoints of economic and political
sciences. The tentative titles of invited speakers are as follows. Prof. Yoshihiko Tsukuda (Tohoku University, Japan), "Sustainable economic development in East Asia and regional cooperation", Prof. Ke-young Chu (Kyung Hee University, Korea), "Economic development in East Asia", Prof. Angang Hu (Tsinghua University, China), "China-Japan relation in East Asia", Prof. Feng Yao (Kagawa University, Japan), "Sustainable economic development and Japan-China international trade relation in East Asia".

Session 2: Global Change, Environment and Natural Disasters

This session is dedicated to discuss urgent issues which the present society is faced with. Especially, we have many issues in the East Asia, such as extreme events with the global warming, yellow dust, air and water pollution, land degradation and so on. These topics are discussed in this session. Prof. Akimasa Sumi (TIGS/CCSR) will present recent results of the global warming simulation based on the high-resolution climate model; Prof. Sixiong Zhao (IAP) will discuss the disastrous weather-climate events, such as heavy rainfall, storms-tropical and extropical and dust storm; Prof. B.J. Sohn (SNU) will discuss the yellow sand aerosols issues over the East Asia; Prof. Tetsuo Yanagi (RIAM/Kyushu University) will present recent findings about the environmental change in the coastal region.

Session 3: Sustainable Development of Foods, Bio-resources, and Energy - Establishing a Recycling-Oriented Society in East Asia

Bio-production is an essential component in our earth system. In last century, bio-production, especially food production had been increasing drastically through the use of fossil fuels, chemical fertilizers, and agrochemicals, which is defined as fossil fuel oriented agriculture (bio-production). However, fossil fuel oriented agriculture (bio-production) have caused global-scale devastation of soil, land and ecosystems. Therefore, there is an urgent requirement to establish an alternative system of sustainable bio-production, including effective biomass and its energy utilization, resource recycling, and reduction of chemical inputs. In this session, we will discuss how to promote collaborative activities on establishing alternative systems of sustainable bio-production. Prof. Dr. Juzo. Matsuda (Hokkaido University, Japan) will present "Current status of biogas plants in Hokkaido". Dr. Masakazu komatsuzaki (Ibaraki University, Japan) will present "Soil Management Strategies for Ensuring Sustainable of Agriculture and Eco-system Service". Prof. Dr. Zhihong Cao (Institute of Soil Science Chinese Academy of Sciences, Nanjing, China) will present "Irrigated Rice Based Production System is an Artificial Wetland Ecosystem for Sustainable Development in East Asia". Prof. Dr. Kyoung-Woong Kim (Gwangju Institute of Science and Technology (GIST), South Korea) will present "Environmental Geochemistry and Risk Assessment". 

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Session 4: Asian Development and Emerging Infectious Diseases

Infectious diseases are often linked to the poverty and underdevelopment. It has been believed that scientific and economic development will terminate infectious diseases. However, we have experienced outbreaks of emerging infectious diseases such as Nipah virus encephalitis in 1999, severe acute respiratory syndrome (SARS) in 2003 and recent avian flu. The origins of these outbreaks are all Asia. Health care systems are rapidly developing in Asia, however, hospital infections with drug-resistant microbes are getting more serious. Considering the dense population in Asia, HIV/AIDS can follow the worst-case scenario. In this session we would discuss about the Asian development and its relation to the infectious diseases focusing on some important examples such as the cross-species infections, HIV/AIDS and hospital infections. The tentative titles of invited speakers are as follows. Prof. Aikichi Iwamoto (Institute of Medical Science, The University of Tokyo): Asian development and emerging infectious diseases: an overview; Prof. George F. Gao (Institute of Microbiology, Chinese Academy of Sciences): Cross-species infections and emerging infectious diseases; Prof. Tetsuya Matsumoto (Tokyo Medical University): Hospital infections with drug-resistant microbes; Prof. Myung-Hwan Cho (Konkuk University, Korea): HIV/AIDS in Asia.

Session 5: Nanotechnology and New Materials

In recent years, new advanced nano-materials such as carbon nano-tubes and nano-porous materials have been developed. On the other hand, significant improvements of computational and instrumental technologies are enabling us to design and to manipulate individual atoms. The combination of nano-technology and computer simulation is achieving remarkable technological innovation. This session discusses the application of recent nano-materials and nano-technology to the energy- and environment-issues for the sustainable development of human society. The tentative titles of invited speakers are as follows. Prof. Yoshiyuki Kawazoe (Institute for Materials Research, Tohoku University) Theoretical prediction of new nanomaterials saving energy; Prof. Mingwei Chen (Institute for Materials Research, Tohoku University) Developing three-dimensional nanostructured materials for the applications in bionanotechnology; Prof. Maki Suemitsu (Center for Interdisciplinary Research, Tohoku University) Sustainable development through semiconductor nanotechnology; Prof. Xie Cishen (Institute of Physics of Chinese Academy of Sciences) Control growth of carbon nanotubes.

Session 6: Information Technology and Sustainable Development

Recently, active use of ICT has been exponentially increased all over the world. Especially in developed countries, people enjoy the benefit from ICT, in various areas represented by economy, business, and other social activities. In addition, ICT has been actively utilized
for development projects. Although ICT may be regarded as luxury and is often given low priority in developing countries, it can be considered as a tool to accelerate development for the local population “by facilitating access to information and communication, thus complementing benefit of other fields”. Given this background, this session aims at analyze and discuss development and introduction of ICT in Asia, focusing on the sustainable factors for its introduction and/or its relationship with sustainable regional development. The invited speakers include, Prof. Gong Ke (President, Tianjin University), Prof. Junichi Takada (Tokyo Institute of Technology), Dr. R. Baterdene (Ministry of Science, Technology, Education and Culture).

Session Schedule

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<td>Registration Opening Session</td>
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Registration: Hotel Nikko New Century Beijing, 0830h to 1700h, Thursday, March 8, 2007
Poster session: Poster presentation of all contributed papers in Sessions 1-6
Closing dinner session: Discussion on the next symposium and action plan

Call for Papers
Participants wishing to present contributed papers are requested to send the title of the paper, authors and their affiliations with the registration form in this circular by email to both the symposium secretariat Yasushi Tsuruo (tsuruo@jsps.org.cn) and the chair of the symposium organizing committee Hiroshi Fukunishi (fuku@pat.geophys.tohoku.ac.jp). The deadline is February 15, 2007.

Abstract Submission
One page abstract of A4-size must be submitted by March 1. This page should include the title of the paper, authors and their affiliations, the main text, figure, table and references (if any). Abstracts must be submitted by email as an attachment. to the symposium
General Information

☐ Period
Thursday, March 8 – Friday, March 9, 2007

☐ Venue
Hotel Nikko New Century Beijing
Add: 6 Southern Road Capital Gym, Haidian District, Beijing 100044, China
Tel: 86-10-6849 2001, Fax: 86-10-6849 1103
E-mail: bc@newcenturyhotel.com.cn
URL: http://www.newcenturyhotel.com.cn

☐ Official Language
English

☐ Registration
Participants are requested to submit the registration form to the following E-mail address.
E-mail: tsuruo@jsps.org.cn
On-site registration is available from 0830h to 1700h on March 8 at Hotel Nikko New Century Beijing. Registration fee is free.

☐ Accommodations
Hotel Nikko New Century Beijing is reserved for symposium participants.
Add: 6 Southern Road Capital Gym, Haidian District, Beijing 100044, China
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Organizing Committee
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Prof. Ke-young Chu (Kyung Hee University, Korea)
Prof. Akimasa Sumi (Transdisciplinary Initiative for Global Sustainability, The University of Tokyo)
Prof. Qing-Cun Zeng (Institute of Atmospheric Physics, Chinese Academy of Sciences)
Prof. Mitsuru Osaki (Graduate School of Agriculture, Hokkaido University)
Prof. Yongguan (Y-G) Zhu (Research Center for Eco-environmental Sciences, Chinese Academy of Sciences)
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☐ Symposium Program
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