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2. Report of the G8 University Summit

Report of the G8 University Summit

29th June - 1st July 2008, Sapporo, Japan

Sponsored by the Ministry of Education, Culture, Sports, Science and Technology, Japan

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Report of the first G8 University Summit Preface

Hiroshi Komiyama,
Chair of the G8 University Summit,
Chair of the Organizing Committee

The rapid expansion of human activities now imposes a heavy burden on the earth, which calls for the urgent development of a vision of achieving global sustainability. International communities have been promoting sustainable development by, for example, adopting the implementation plan at the World Summit on Sustainable Development (WSSD) and discussing global environmental issues at G8 Summit meetings. Universities have also been discussing how we could contribute to the advancement of global sustainability, including the announcement of the Talloires Declaration in 1990. Moreover, leading global universities are now expected to step up the effort in response to the urgent need for forming a new framework and for educating next generations who will play a major role in achieving global sustainability, based on super long term perspective.

In this context, the G8 University Summit on the occasion of the G8 Hokkaido Toyako Summit, convened 29th June-1st July, 2008 in Sapporo, Japan, through the Organizing Committee consisting of 14 Japanese universities with the support of the Ministry of Education, Culture, Sports, Science and Technology (MEXT) of Japan, for the first time in history. Leaders of the 35 universities from 14 countries including the G8 and other major countries participated to discuss the roles of universities and specific actions to be taken in achieving global sustainability from the academic and neutral point of views, as well as to encourage international community to join our efforts toward a common goal.

At the G8 University Summit, under the main theme, "Global Sustainability and the Role of Universities," the participating universities presented on measures they had been taking and discussed future directions and possible actions in two Parallel Sessions: (A) "New Scientific Knowledge and International Network

to Support Global Sustainability," and (B) "Knowledge Innovation towards Global Sustainability and Education."

As a result, the G8 University Summit adopted the Sapporo Sustainability Declaration, which confirms the roles of universities in research for achieving sustainability through the formation of the Network of Networks that links various existing research networks, and in education for sustainable development; commits actions to be carried out by the participating universities for achieving their own sustainability; and proposes to the leaders of the G8 Hokkaido Toyako Summit that they implement scientifically appropriate policies.

After the G8 University Summit, I visited then Prime Minister, Yasuo Fukuda, Chair of the G8 Hokkaido Toyako Summit, to hand the Declaration and to request for the G8 Leaders' support for our committed actions. In the G8 Hokkaido Toyako Summit Leaders Declaration, it was agreed that Education for Sustainable Development (ESD) should be promoted through knowledge networks among relevant institutions including universities toward the establishment of a sustainable low carbon society.

According to the Sapporo Sustainability Declaration, the participating universities are to make every effort to fulfill the commitment and to call upon other universities to join the commitment. I hope this report, which summarizes the results of the G8 University Summit, will be utilized widely for the propagation of our proposals.

Universities are in the position to serve as an "intellectual core" and as an experiment station for a new framework and are expected to contribute much to the society in realizing global sustainability. G8 University Summit in Sapporo was very fruitful in deliberating specific actions but is considered to be the first step toward the goal. I sincerely hope that the participating universities will reinforce our commitment and it will be carried forward by the next G8 University Summit, which will be held in Italy next year where the G8 Leaders Summit will be held.

Last but not least, I would like to express my sincere appreciation to the participants and to those who supported the G8 University Summit, in particular, to the faculty and staff of Hokkaido University and the people of Hokkaido who actually made the Summit successful.

Note 1 : G8 University Summit HP Sapporo Sustainability Declaration (SSD)
Note 2 : Leaders Declaration of G8 Hokkaido Toyako Summit
http://www.mofa.go.jp/policy/economy/summit/2008/doc/doc080714__en.html

Prospectus

Global Sustainability and the Role of Universities

Background

The dramatic expansion of human activities in recent decades, through mass-consumption of resources and energy, began to exert serious negative impacts on the global environment as seen in human-induced climate change and ever-increasing waste volume. To meet the challenge of these problems, it is critical to understand accurately and comprehensively the situation that is disrupting the interrelationships among the global, social and human systems; propose policies to reconstruct these systems and restore their inter-relationships from the viewpoint of global sustainability; and present a vision for assuring a prosperous human society for future generations.

The G8 Summit has been playing a leading role in the international efforts to tackle the global environmental problems. In particular, at the Heiligendamm G8 Summit held in Germany in 2007, a proposal by the Japanese Government entitled "Cool Earth 50," which calls for the world-wide carbon dioxide emissions to be halved by 2050, was supported, together with the long-term plan for CO2 reduction presented by EU and Canada; and a new international framework that includes developing countries was discussed. At the G8 Summit scheduled for Toyako, Hokkaido in 2008, a post-Kyoto Protocol framework will be discussed with the aim of reaching agreement by 2009, along with mechanisms for international collaboration on the 3R Initiative (Reduce, Reuse and Recycle).

Purpose: contribution from academia – inter-university cooperation and Education –

For the studies of these global issues, contributions from academia are vital. As seen in an example of the Intergovernmental Panel on Climate Change (IPCC), which has achieved a great success in conducting scientific evaluations and predictions of the problems associated with climate change, the role of leading research universities is enormous. The issue of global sustainability is multi-faceted and the realization of sustainable earth calls for the academia to put its intellectual resources together; thus leading research universities now must join forces to form a new framework. As the G8 nations are expected to play the leadership role in this field, the G8 University Summit aims to make international contributions representing academia through inter-university

cooperation to achieve the sustainability of the global, social and human systems and their mutual relationships.

Education is another important role that these leading research universities play in achieving the goals such as those described above. To realize sustainability, an approach with a super-long term perspective spanning the entire 21st century must be taken, and the next generation must be educated to carry on our objectives accordingly. We believe that the promotion of education on sustainable development and construction of an international network through the cooperation of leading research universities in the developed countries, including the G8 nations, and major emerging economies, including China and India, will contribute enormously to the establishment of a sustainable society including achieving the goal of millennium development.

Output: Making proposals from Academia

For this G8 University Summit, the presidents of research universities that play leading roles in academia are invited from Japan (where the summit is to be held) and the G8 nations, to discuss how we take on the challenge of the above mentioned global and human issues. In addition, based on the recognition that co-operations with major developed countries not represented by the G8 such as Republic of Australia and Korea, and major emerging economies like Brazil, China, India and South Africa is essential, the leading universities from these countries will be invited along with the universities from the G8 nations.

We hope that the results of the discussion will be supported by the G8 and other international consensus-building processes to achieve global sustainability.

Programs

June 29 (Sunday)

June 29 (**Sunday**)	Duration (minutes)	Programs
17:30-18:30	60	**Meeting by expected Chairs and Vice-Chairs of the Sessions** （The Univ. of Tokyo, Hokkaido Univ., Keio Univ., Univ. of Alberta, Politecnico di Torino)
19:00-20:30	90	**Welcome Party** Hosted by Hokkaido University and Hokkaido Toyako Summit Preparation Council 2008

June 30 (Monday)

June 30 (**Monday**)	Duration (minutes)	Programs
9:00-9:40	40	**Opening Session**
9:00-9:05	5	Opening remarks Chair of the Organizing Committee: President Hiroshi Komiyama of the University of Tokyo
		Congratulatory speech by guests of honor
9:05-9:10	5	Message from the Prime Minister Yasuo Fukuda
9:10-9:20	10	Minister Kisaburo Tokai, Ministry of Education,Culture, Sports, Science and Technology
9:20-9:35	15	Introduction of the participants
9:35-9:40	5	Approval of the Chair and Vice-Chairs of the Plenary and Parallel Sessions
9:40-10:30	50	**Plenary Session**
9:40-10:00	20	Explanation of the purpose of the Plenary Session Chair of the Plenary Session: (President Hiroshi Komiyama of the University of Tokyo)
10:00-10:10	10	Explanation of the purpose of the Parallel Session A Chair of Session A and Vice-Chair of Plenary Session: (President Hiroshi Saeki of Hokkaido University)
10:10-10:20	10	Explanation of the purpose of the Parallel Session B Chair of Session B and Vice-Chair of Plenary Session: (President Yuichiro Anzai of Keio University)
10:20-10:30	10	Questions and Answers
10:30-10:45	15	**Coffee Break**
10:45-12:00	75	**Plenary Session** *<Raising Issues>*

		Presentations
10:45-10:55	10	Kyushu University
10:55-11:05	10	The University of British Columbia
11:05-11:15	10	Ecole Polytechnique
11:15-11:25	10	LMU Munich
11:25-11:35	10	Far Eastern National University
11:35-12:00	25	Discussions
12:00-13:00	60	**Lunch** Hosted by the Organizing Committee

June 30 (**Monday**)	Duration (minutes)	Programs **Parallel Session A**
13:00-15:05	125	**Parallel Session A** 'New Scientific Knowledge and International Network to Support Global Sustainability' • <New Scientific knowledge on Global Sustainability> • <Network of Networks (NNs)>
13:00-13:05	5	Opening remarks by the Chair of Parallel Session A (Hokkaido University) <Presentations>
13:05-13:20	15	Tokyo Metropolitan University
13:20-13:35	15	Università degli Studi di Firenze
13:35-13:50	15	The University of Cambridge
13:50-14:05	15	Yale University
14:05-14:20	15	Peking University
		<Comments>
14:20-14:25	5	Tohoku University
14:25-14:30	5	Tokyo Institute of Technology
14:30-14:35	5	Ritsumeikan University
14:35-15:05	30	Discussions
15:05-15:30	25	**Coffee Break**
15:30-17:30	120	**Parallel Session A**

15:30-15:35	5	Remarks by the Vice-Chair of Parallel Session A (University of Alberta) <Presentations>
15:35-15:50	15	Waseda University
15:50-16:05	15	Indian Institute of Technology, Kanpur
16:05-16:20	15	Seoul National University
16:20-16:35	15	University of Johannesburg
16:35-16:50	15	RWTH Aachen University
		<Comments>
16:50-16:55	5	Tohoku University
16:55-17:00	5	Tokyo Institute of Technology
17:00-17:05	5	Ritsumeikan University
17:05-17:30	30	Discussions
17:30-17:40	10	**Commemorative photograph of the heads of the delegations**
19:00-20:30	90	**Reception** Hosted by the Organizing Committee

June 30 (**Monday**)	Duration (minutes)	Programs **Parallel Session B**
13:00-15:05	125	**Parallel Session B** 'Knowledge Innovation towards Global Sustainability and Education' • <Knowledge Innovation as a Trigger for Social Reform> • <For Global Sustainability of the Next Generations - Education>
13:00-13:05	5	Opening remarks by the Chair of Parallel Session B (Keio University) <Presentations>
13:05-13:20	15	Hitotsubashi University
13:20-13:35	15	Université Paris-Sorbonne (Paris IV)
13:35-13:50	15	(Lomonosov Moscow State University)
13:50-14:05	15	Imperial College London

14:05-14:20	15	University of California, Los Angeles
		<Comments>
14:20-14:25	5	Nagoya University
14:25-14:30	5	Osaka University
14:30-14:35	5	Doshisha University
14:35-15:05	30	Discussions
15:05-15:30	25	**Coffee Break**
15:30-17:30	120	**Parallel Session B**
15:30-15:35	5	Remarks by the Vice-Chair of Parallel Session B (Politecnico di Torino) <Presentations>
15:35-15:50	15	Kyoto University
15:50-16:05	15	The Australian National University
16:05-16:20	15	University of São Paulo
16:20-16:35	15	Tsinghua University
16:35-16:50	15	(University of Delhi)
		<Comments>
16:50-16:55	5	Nagoya University
16:55-17:00	5	Osaka University
17:00-17:05	5	Doshisha University
17:05-17:30	30	Discussions
17:30-17:40	10	**Commemorative photograph of the heads of the delegations**
19:00-20:30	90	**Reception** Hosted by the Organizing Committee

July 1 (Tuesday)

July 1 (**Tuesday**)	Duration (minutes)	Programs
9:00-10:35	95	**Plenary Session**
9:00-9:15	15	<Presentation on the Summary of the Parallel Sessions> Parallel Session A Chair (Hokkaido University) Vice-Chair (University of Alberta)
9:15-9:30	15	Parallel Session B Chair (Keio University) Vice-Chair (Politecnico di Torino)
9:30-9:45	15	Overall comments United Nations University
9:45-9:55	10	Proposal for the 'Sapporo Sustainability Declaration (SSD)'* of the G8 University Summit *tentative name
9:55-10:25	30	Discussions
10:25-10:35	10	Proposal for the next G8 University Summit
10:35-11:05	30	**Coffee Break** (Amendment of the SSD)
11:05-11:30	25	**Closing Session** Adoption of the 'Sapporo Sustainability Declaration (SSD)' Summary and closing remarks by the Chair
11:30-12:00	30	**Press Conference** Chair and Vice-Chair of the Sessions
11:30-12:00	30	Break -- for the universities other than above
12:00-13:15	75	**Farewell Lunch** Hosted by the Organizing Committee
13:30-18:40	310	**Excursion (for those registered)**
18:40-20:00	80	**Dinner** Hosted by Hokkaido University

Message from the Prime Minister

June 2008
Yasuo Fukuda,
Prime Minister of Japan

Distinguished Participants,

I am honored to offer my congratulations on the opening of the G8 University Summit in Japan, and to express my high expectations concerning the outcomes of this event.

Today global environmental issues have progressed beyond the stage of merely requiring discussion of their impact; they have become true problems that exert a major influence on our lifestyles and economic activities. Tackling these issues and building a sustainable society is an urgent task for humankind in the 21st century. The international community must join hands to address them on a global scale. G8 and other industrialized nations are called upon to play a central role in the resolution of the crisis that affects our planet, and the question of their contribution will be a key topic on the agenda of the Hokkaido Toyako Summit.

I understand that the G8 University Summit is an opportunity for universities from G8 and other nations around the world to gather ahead of the Hokkaido Toyako Summit and to search for ways to create a new society, while keeping in mind the unique economic, social, historical, and cultural conditions of each region in the world. This new society shall not only be a low-carbon, nature-friendly society; it will also be a recycling-oriented society in which water and food waste are recycled. This endeavor requires that research be promoted even further in various areas, that fields of knowledge be integrated and re-sculpted, and that new knowledge be generated for the building of a sustainable society.

At the same time, I believe "people" to be the most important element in developing a sustainable society. In order to make a sustainable future possible, we need to reform the entire socioeconomic system and encourage each and every person to change his or her understanding, values, and lifestyle. "Education for Sustainable Development (ESD)" has emerged as an important perspective that enables these kinds of changes. ESD was first proposed by Japan at the World Summit on Sustainable Development held in Johannesburg in 2002. Following its adoption in a resolution by the United Nations General Assembly, the concept has been promoted in countries throughout the world.

Universities are responsible for the integrated oversight of education and research. In these two areas, universities bear a very large responsibility with regard to global environmental issues, and it is highly expected to play an important role in those resolutions. In this perspective, the G8 University Summit is very timely as a first experiment in having universities that lead higher education and research in their nations gather together to discuss inter-university cooperation and partnerships on the theme of global sustainability.

In closing, I would like to express my hope that this G8 University Summit will result in fruitful discussions, and that efforts to create a sustainable society will be promoted in an even more dynamic way.

Message from the Minister of MEXT

Kisaburo Tokai
Ministry of Education, Culture, Sport, Science and Technology

Distinguished University Delegates,
Ladies and Gentlemen,

I am pleased to address the opening ceremony of this first G8 University Summit, organized by Japan, and I sincerely thank all of you for your participation.

The G8 University Summit is an unprecedented attempt to bring together the representatives of leading academic institutions in order to address and promote cooperation on the global issue of sustainability. I appreciate the efforts of those involved in making this concept a reality, and express my esteem to the university presidents and officials. We expect this Summit will bring great outcome.

As you know, the initiative of Education for Sustainable Development was proposed by Japan at the Johannesburg Summit in 2002. Three years later in 2005, the United Nations launched the UN Decade of Education for Sustainable Development. "Sustainable development" requires the participation of a wide range of education, research and social activities. My ministry is of course mainly involved in the fields of education and scientific research.

In order to respond to the environmental issues, particularly climate change, a unified global response is essential, and I place particular hopes on the role of universities. The advanced scientific contributions are well illustrated in the work of the Intergovernmental Panel on Climate Change, which focuses on evaluating and forecasting the evolution of global warming.

Universities face the unprecedented expectations, and the academic community must rise to this important challenge now. International cooperation is crucial to fully leverage the combined potential of universities, and so the timing of this meeting could not be more appropriate, as G8 leaders gather to discuss the issues of climate change and the environment, a key item on their agenda.

Please allow me to express one more wish concerning this Summit. International cooperation is the foundation that allows students and researchers to participate actively and freely. As you may know, Japan has approximately 120-thousand international students now. Our Prime Minister, Yasuo Fukuda has launched a new plan to bring this number to 300-thousand, and we are now working to achieve this objective.

As we strive to promote the development of international exchange between students and researchers, I sincerely hope that this forum will contribute to expanding academic relations beyond the group of universities represented here today.

Finally, I would like to thank all those involved in the preparation of this Summit, in particular the University of Tokyo, Hokkaido University, Keio University, and the members of the operating committee. I hope that this event will bring further innovation and strengthen friendly relations between participating countries.

Thank you very much.

G8 University Summit 29th June - 1st July 2008, Sapporo, Japan

Chair's Summary

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Introduction

Outline of the G8 University Summit

1. The G8 University Summit was held in Sapporo, Japan on 29 June - 1 July, 2008, and hosted by the G8 University Summit Organizing Committee, which consisted of 14 Presidents of Japanese universities, with the assistance of the Ministry of Education, Culture, Sports, Science and Technology of Japan. Participants included Presidents, Rectors, Chancellors, Vice-Chancellors and other representatives (hereinafter referred to as "Presidents") of 27 leading universities in the G8 member nations, the United Nations University and seven universities from six major non-G8 nations who were invited to participate in the Summit. (See Appendix A, List of Participants)

Objectives of the Meeting

2. The objectives of the meeting were:

- to develop common recognition of the need for global sustainability, through exchange of information and views;
- to discuss the responsibility of universities to contribute toward the attainment of global sustainability and the specific actions they must undertake to fulfil that responsibility; and
- to agree upon and provide messages of the universities to the G8 leaders as well as to society in general, aimed at facilitating all entities, including universities, to take actions for global sustainability.

Presentations, Discussion and Results of the Summit

Opening Session

3. The Chair of the Organizing Committee of the G8 University Summit, President Hiroshi Komiyama of the University of Tokyo, made opening remarks and welcomed the participants on behalf of the Organizing Committee.

4. A welcoming message from the Prime Minister of Japan, Mr. Yasuo Fukuda, was introduced, in which the Prime Minister expressed his high expectation that Presidents of leading universities would provide an important message to the world for achieving global sustainability from the standpoint of academic society. Remarks by Minister Kisaburo Tokai, Ministry of Education, Culture, Sports, Science and Technology of Japan, were distributed to participants, in which he emphasized the importance of international cooperation within the academic community.

5. President Hiroshi Komiyama of the University of Tokyo was elected as the Chair of the Summit. President Hiroshi Saeki of Hokkaido University and President Yuichiro Anzai of Keio University were elected as Vice-Chairs of the Summit. They were to chair Parallel Sessions A and B respectively; "New scientific knowledge and international network to support global sustainability" and "Knowledge innovation towards global sustainability and education". President and Vice-Chancellor Indira V. Samarasekera, University of Alberta, Canada, and Rector Francesco Profumo, Politecnico di Torino, Italy, were elected as Vice-Chairs of Parallel Sessions A and B respectively.

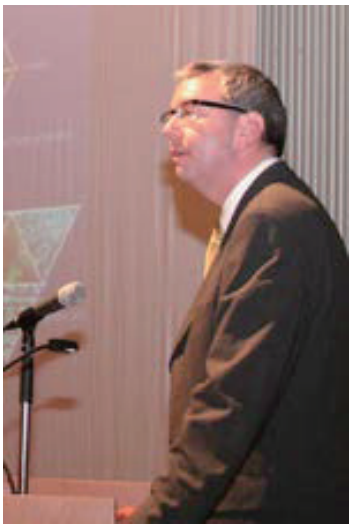
Plenary Session

6. President Komiyama, as the Chair of the Summit, explained that the Plenary Session was aimed at reaching a common understanding of the purposes, procedure and outputs of the Summit. He also introduced his "2050 Vision" roadmap for a sustainable earth, the Integrated Research Systems for Sustainability Science (IR3S) and other activities of the University of Tokyo aiming at promoting sustainability.

7. The purposes of Parallel Sessions A and B were introduced by the respective Chairs, President Saeki of Hokkaido University and President Anzai of Keio University.
Universities are responsible for creating new scientific knowledge through integrating differing disciplines. Therefore networking between academic networks is more important than ever before. President Saeki briefly outlined the aim of Session A, introducing some of his university's initiatives such as the Hokkaido University Initiative for Sustainable Development (HUISD) and the establishment of the Center for Sustainability Science as its educational body. Referring to the purpose of the Parallel Session B, President Anzai mentioned the important role of the universities in developing knowledge through research and education and thereby contributing toward the sustainability of society.

8. Five Presidents of universities introduced issues to be discussed at the Summit as follows:

9. President Tisato Kajiyama of Kyushu University introduced his university's attempt to develop its campus as an "Energy Campus", to be promoted as the nation's leading energy research and development centre. He emphasized the intellectual role of universities in solving global issues, and leading the advancement of knowledge. He also pointed out the important role universities play in fostering human resource development.



10. In his presentation, President and Vice-Chancellor Stephen J. Toope of the University of British Columbia mentioned that it is vital in the context of today's imperilled world that the top scholars and top university administrators engage more directly in society as advocates and facilitators of change. He introduced his university's successful attempts to prove this new model of engagement, including demonstration of best practices, and called for international university partners to take up the challenge.

11. President Xavier Michel of Ecole Polytechnique introduced his university's three principal areas for sustainable development. The university provides three Masters degree courses to bridge the gap between pure theoretical and interdisciplinary approaches, with the goal of providing education to develop the sensitivity of students to emerging environmental problems and the necessity of sustainable development. It is intensively participating in research on global change and sustainable development, and has also committed to become a model and an experimental test ground for sustainable campuses.

12. President Bernd Huber of LMU Munich, emphasized that a worldwide discussion is needed to rethink all measures undertaken toward global sustainability until now, in order to avoid further damage in the future. He insisted that universities should not only encourage development of scientific knowledge on sustainability but also serve as role models for the public and promote awareness of the importance of sustainability by citizens and political leaders. He also noted that occasions such as the G8 University Summit are important opportunities to formulate a network of research intensive universities and institutions to create a platform for conducting inter- and cross-disciplinary research.

13. Referring to the G8 Declaration, "Education for Innovative Societies in the 21st century" (Saint-Petersburg, 2006) for action by leading research universities, President Vladimir Kurilov of Far Eastern National University proposed establishing a G8 University Council on Sustainability, to prepare reports for G8 governments on the most important environmental issues. He referred to the recent initiative of the Network of Federal Universities by the government of Russia on global sustainability.

14. Participants engaged in discussion based on the issues arising from the presentations:

- Interdisciplinarity was affirmed as a key issue, with suggestions that in the past the concept of sustainability has been biased towards natural science and technology. Social scientists should be encouraged and supported to take an equal part in research and teaching efforts by universities to tackle sustainability issues. Interdisciplinarity also requires strong leadership to ensure it is not disadvantaged by external pressures such as citation indexes, which favour traditionally-defined disciplinary boundaries.

- The discussion highlighted the need for research and knowledge developed by universities to be effectively communicated to governments and policymakers. To this end, universities should support and defend scholars who engage in public debate, and support researchers in developing skills which will enable them to successfully present messages to policymakers.
- It was recognized that if universities are to promote sustainability, they must make their own campuses sustainable, as a model and example for society.
- Participants also emphasized the issues of poverty and equity related to developing countries in the efforts of universities towards sustainability, and the education of younger children to effect lasting changes in society.
- The Chair of the Plenary Session concluded that the discussion had raised issues in three key areas: interdisciplinarity, the identity of universities, and the importance of diversity.

Parallel Session A: ”New scientific knowledge and international network to support global sustainability”

15. The Chair of Session A, President Saeki, opened the session and invited the Presidents of the five universities participating in the session to present their views on the issues of “new scientific knowledge on global sustainability” and the “network of networks (NNs).”

16. President Takehiko Sugiyama of Hitotsubashi University explained that the university, which has been playing a prominent role in conducting social-scientific research on environmental issues, is currently promoting interdisciplinary and international research projects on the basis of a long-term strategy and a mid-term plan, particularly focusing on East Asia. He proposed supporting joint research into environmental problems from a social science perspective, and establishing programs to strengthen multifaceted and multi-layered networks among institutions.

17. Vice-Rector Guido Chelazzi of the Università degli Studi di Firenze mentioned that his university is very active in the building of a European “knowledge-based” society through, for example, joining international research networks within the European Framework Programmes. He also called for a stronger national policy for scientific research and higher education in order to improve the capacity of the university to trigger innovation in the regional production system toward sustainable development.

18. Professor Peter Guthrie, Director of the Centre of Engineering for Sustainable Development of the University of Cambridge pointed out that universities are faced with unprecedented levels of concern at the highest political levels about the urgency for action to tackle climate change, and that a key challenge for science and technology is the shortening of the period between discovery and implementation, which may bring about unintended but in many cases adverse consequences. He mentioned that the University of Cambridge understands these challenges and seeks to play a role through, for example, close co-operation with academic institutions domestically as well as internationally. He also referred to his university's close working links with industry and policy makers.

19. Mr. Donald Filer, Director of the Office of International Affairs of Yale University, explained that his university has embarked on a wide array of initiatives to advance the science and model the practice of sustainability under President Richard C. Levin's leadership. These initiatives include establishing its goal of emissions reductions of greenhouse gases (GHGs) and an Office of Sustainability, as well as co-operating with other universities worldwide in sharing best practices and setting reduction targets of GHGs. He emphasized that the process of achieving these emission reduction goals by the universities demonstrates that any organization can achieve significant reductions with manageable costs.

20. Executive Vice-President and Provost Jianhua Lin of Peking University introduced China's Challenges of sustainable development and roles and activities of his university, including Campaigns of Air Quality Research in Beijing and the Surrounding Region (CAREBEIJING) to formulate policy suggestions for air quality attainment during the 2008 Olympic Games, long–term research on endangered species and landscape conservation in Western China not only to conserve biodiversity but also to encourage sustainable lifestyles, building a sustainable campus as a model for society, and enhancing domestic and global cooperation. He emphasized that his university is eager to cooperate with international partners in relevant studies for the benefit of all entities involved.

21. Following these presentations, President Akihisa Inoue of Tohoku University, President Kenichi Iga of Tokyo Institute of Technology, and President Kiyofumi Kawaguchi of Ritsumeikan University introduced relevant activities from their universities, and emphasized the importance of approaching global environmental issues not only from the natural sciences but also from the social sciences.

22. Participants engaged in discussions based on the presentations made in the first part of the session, highlighting several key conclusions:

- Regarding undergraduate study, the advantage of a case-based teaching approach compared to a discipline-based approach is that it can provide room for creativity in the curriculum. One possibility is to give teaching programs more depth and breadth, for example by extending the length of degree programmes by one year.
- To develop interaction between scholars and policymakers, there is an important role to be played by independent scientific advisors to governments, who have an academic base and are encouraged to challenge policy.
- In order to inform and promote public debate, public lectures and symposiums should be promoted.

23. The Vice-Chair of Session A, President and Vice-Chancellor Samarasekera, invited the Presidents of the five universities participating in the second part of the session to make their presentations.

24. President Jun-ichi Nishizawa of Tokyo Metropolitan University warned that it is necessary for us to show the superiority of our intellect and that we must evade the global crisis caused by climate change. He re-emphasized the risks of not reducing our heavy reliance on fossil fuels in the current industrial system.

25. Professor Kripa Shanker, Deputy Director of the Indian Institute of Technology, Kanpur, emphasized that education is a key instrument for bringing about changes in knowledge, values, behaviours and lifestyles required to achieve sustainability. He also mentioned that scientific knowledge should be translated to provide implementable solutions which are understandable by all. He further noted that interdisciplinary and inter-sectoral approaches should be promoted by means of collaborative scientific efforts; national, regional and international networking, systems analysis tools and telecommunication technologies will play a very important role.

26. President Jang-Moo Lee of Seoul National University reiterated that the creation of a sustainable society signifies the pursuit of development that simultaneously satisfies the need and want for the development of human abilities, economic vitality, social equality and environmental conservation. He introduced the approach of his university, which includes specialized student selection processes, developing technologies and integrated research for sustainability. He expressed his hope that these efforts will be shared by the universities attending the Summit, and will lead to further international co-operation.

27. Vice Chancellor and Principal Ihron L. Rensburg of the University of Johannesburg expressed his concern that Africa has been marginalized from the expansion in scientific knowledge induced by globalization. He emphasized that integrating Africa into the global body of scientific knowledge is important for the world and his country, and that universities have a critical responsibility in this regard. He introduced several activities undertaken by South African universities and pointed out that mutually beneficial strategic partnerships and knowledge networks between Africa and international partners, in which the University of Johannesburg will become a hub, are pivotal for the successful implementation of their initiatives and for integration of the continent into the global academy.

28. Rector Burkhard Rauhut of RWTH Aachen University described his university's approach to today's global challenges, as well as the close network of the members of the IDEA League in Europe. He then introduced several examples of initiatives undertaken towards a sustainable campus, including the designation of a new campus area to facilitate closer contacts between the industrial and academic worlds.

29. The Presidents of Tohoku University, Tokyo Institute of Technology and Ritsumeikan University again made their comments on the issues presented, highlighting the efforts of their universities toward achieving energy efficiency, the importance of networks and joint degree programs for the exchange of researchers. Regarding the Network of Networks, questions were raised as to the concrete tools with which feasible and effective networks can be created.

30. The participants discussed the issues comprehensively and provided comments to be used by the Chair and Vice-Chair in their report to the Plenary Session on the next day. The participants warned against networking "for the sake of networking", and noted that for the Network of Networks to be effective, it must be carefully designed, with links between institutions that share similarities as well as differences. Networks must involve the exchange of students at undergraduate level, and practical co-operation between researchers.

Parallel Session B: "Knowledge innovation towards global sustainability and education"

31. The Chair of Session B, President Anzai of Keio University, introduced the following issues and invited the Presidents of the four universities participating in the session to present their views on the issues of "knowledge innovation as a trigger for social reform," and "education for global sustainability of future generations."

32. President Kazuo Oike of Kyoto University emphasized that effective sustainability science must include the lithospheric sciences, and that neglect of these fields may be fatal – as demonstrated by the tsunami disaster in the Indian Ocean and the recent earthquake in China's Szechuan province. He also introduced several research activities aimed at gaining new knowledge in the field of lithospheric science and technology.

33. President Georges Molinié of Université Paris-Sorbonne (Paris IV), referred to the crucial role of the humanities and social sciences in defining what sustainability and equality are. He highlighted the divisions between rich and poor, and that such diversity should not be neglected; without paying attention to it, science and technology alone will not provide effective answers. President Molinié observed that economic issues are now closely related to ethical and political considerations. In this context, he emphasized that academic meetings such as the G8 University Summit should precede those by politicians, in the same way that reflection on education should precede that on economic strategies.

34. Pro-Rector Mary Ritter of Imperial College London emphasized that global challenges need global solutions, and that universities have an essential role to play in meeting such challenges through education. She also mentioned that knowledge transfer and collaboration with enterprise and industry is vital to address global and societal needs. She stressed that university-led education must ensure that graduates' skills are well matched with employers' needs, producing global citizens to work on the global stage. To this end, the collaboration of universities through networks (the network of networks) in the design and delivery of training is an effective approach. She added that universities must be engaged in outreach activities to ensure true sustainability for future generations.

35. Chancellor Gene Block of the University of California, Los Angeles, noted that research universities are uniquely qualified to lead the world to lasting solutions since they have the broad expertise and the technological resources to address climate change and advance sustainability practices. He encouraged faculty and university leaders to break out of longstanding disciplinary silos to form collaborations and partnerships. In particular, he pointed out the following four obligations of universities: working across disciplinary boundaries, bridging campus and community, forming institutional partnerships and building links with business and industry. While supporting the proposal for a Network of Networks, Chancellor Block proposed the creation of a new international institution.

36. President Shin-ichi Hirano of Nagoya University, President Kiyokazu Washida of Osaka University, and President Eiji Hatta of Doshisha University commented on the presentations by the four universities. Their comments recalled the philosophical problems of fulfilling seemingly endless human wants and needs, and recognized the importance of raising awareness of sustainability in local communities.

37. The participants engaged in discussion of the issues raised, raising the possibility of a Network of Networks operating as an "institute" that exists in cyberspace.

38. The Vice-Chair of Session B, Rector Francesco Profumo of Politecnico di Torino, then invited the four presidents of the universities participating in the second part of the session to make presentations.

39. President Katsuhiko Shirai of Waseda University emphasized that countries and regions must share their experiences and work together in order to realize global sustainability, and that co-operation between universities and industry is also indispensable. He introduced his university's attempts to create a research and education model to nurture leaders who are able to challenge global issues: the "Global Challenge" which is a joint education programme under a consortium at undergraduate level and the "Joint Graduate School" with Peking University, which offers dual degrees of advanced science research and community-based research.

40. Vice-Chancellor Ian Chubb of The Australian National University stressed that sustainable development is arguably the key challenge facing humanity in the 21st century and that the important role of universities is in addressing the challenge of being fair to future generations. Research institutions require not only more disciplinary-based knowledge but inter-disciplinary research to grapple with the opportunities and threats faced by future generations. He noted that achieving sustainability in the long term will require social changes in the near term, and that universities have an important role to play in this transition process. He emphasized the role of leadership, suggesting that universities have not been successful in shaping future leaders.

41. Professor Carlos Clemente Cerri of the Center of Nuclear Energy in Agriculture at the University of São Paulo, introduced the education system of his country and the main sustainability programs of his university, including water and energy efficiency, recycling, alternative energy sources, social responsibility and programs for the reduction of GHGs (Greenhouse Gases) emissions. In its energy efficiency program, the university has saved US$ 12.5 million by investing US$ 1.6 million. He mentioned that as part of the GHGs emissions program, the university is developing a university-wide emissions inventory.

42. Vice President Weihe Xie of Tsinghua University noted that great innovations take place at the borders of disciplines. He stressed the unique role of research universities in pursuing global sustainability, and introduced his university's "Green University Programme" as an example of a major effort by a research university to support sustainable development through knowledge innovation. He also suggested that the G8 member nations establish a University Knowledge Innovation Foundation, award the Best-50 university proposals towards global sustainability and establish an Eminent Professor Panel to provide advice on dealing with urgent issues such as climate change.

43. The Presidents of Nagoya University, Osaka University, and Doshisha University again commented on the presentations by the four universities. Their comments raised concerns regarding the gap of information between professionals of different fields, and between professionals and laymen, suggesting that universities should educate facilitators of communication who could reduce these gaps.

44. The participants engaged in intensive discussion of the issues and provided comments to be used by the Chair and Vice-Chair in their report to the Plenary Session on the next day. In the course of the discussion, the need for building a link between poverty alleviation and sustainability was highlighted. International frameworks should be adopted to overcome administrative barriers to the mobility of students and academic staff.

Plenary Session

45. The Chair of the Summit, President Komiyama, invited the Chairs and Vice-Chairs of the Parallel Sessions to report the results of the Sessions to the Plenary. President and Vice-Chancellor Samarasekera, in her summary of Parallel Session A, raised questions for further discussion; to identify both possible obstacles which could hamper the promotion of the network of networks, and concrete tools with which to create feasible and effective NNs. She also highlighted important issues for sustainable development which were not dealt with in the session, including renewable energy, energy efficiency, lifestyle change, agriculture and global health. Rector Profumo then introduced the outcomes of Parallel Session B, drawing attention to the importance of engaging participating universities in a virtual network of information exchange toward the 2009 G8 University Summit and of merging societies of universities and societies of scientific research into a single forum.

46. Rector Konrad Osterwalder of the United Nations University made comments on the overall results of the Sessions. He pointed out that universities should take actions toward global sustainability in co-operation with not only other universities but also with all other entities concerned. He emphasized the responsibility of universities to not only include sustainability in their teaching and research activities, but also to explain the problems and solutions of sustainability to the politicians, the opinion-makers and the general public in their countries and beyond. He stated that UNU feels a strong

responsibility to push the discussion of sustainability questions and the taking of measures to prevent disasters at the global level, with the UN and with all the member states.

Adoption of the Declaration

47. The Chair introduced the draft of the Sapporo Sustainability Declaration (tentative name) for participants to discuss and suggest amendments.

48. Participants suggested involving students in the G8 University Summit process, keeping the network of the G8 University Summit open for other universities to join, and asking all Presidents of universities in G8 member nations to deliver the outcome of the Summit to their respective governments, in order to improve understanding before the G8 Hokkaido Toyako Summit.

49. Following intensive discussion, the Sapporo Sustainability Declaration, amended as appropriate, was adopted unanimously.

Summary by the Chair

50. President Komiyama congratulated participants on the successful conclusion of the first G8 University Summit and summarized the meeting as follows:

- It is time for us to take action, both in terms of our own initiatives such as sustainable campus projects and co-experiments with society, and by working with society and policy makers on their own initiatives;
- He stated his conviction that universities have a very strong potential for becoming a driving engine for social movements, utilizing their advantage of political neutrality; and
- He proposed that the University of Tokyo serve as a tentative secretariat for the process to establish the NNs. The proposal was welcomed by the participants.

The Presidents unanimously supported the Chair's proposal to produce a Chair's Summary document detailing the proceedings of the summit.

2009 G8 University Summit Meeting

51. The Presidents welcomed the proposal by Rector Francesco Profumo on behalf of the Conference of the Rectors of Italian Universities to hold the next G8 University Summit on the occasion of the 2009 G8 Summit to be held in Italy.

Closing

52. The Presidents of G8 member nations expressed their appreciation for the participation and invaluable contributions of the invited universities at the G8 University Summit.

53. The participants acknowledged and expressed their appreciation for the work of the Organising Committee of Japanese universities, in providing a valuable opportunity for the Presidents of leading universities to share their

views on sustainability on the occasion of the G8 Hokkaido Toyako Summit. They also expressed their high expectations that universities all over the world would endorse the declaration and take actions appropriate to their respective countries and regions.

54. President Saeki of Hokkaido University expressed his gratitude to all participants for visiting Hokkaido and the city of Sapporo, on behalf of the local citizens and institutions.

55. President Komiyama reiterated that the output of the Summit should be an important input into the G8 Hokkaido Toyako Summit and mentioned that he would hand the Declaration to Prime Minister Fukuda of Japan, who will chair the Toyako Summit Meeting.

Appendices

A. List of the Participants

(Appendix A)
Participating Universities of the G8 University Summit

G8 Countries	Canada	The University of British Columbia	President and Vice-Chancellor Stephen J. Toope
	Canada	University of Alberta	President and Vice-Chancellor Indira V. Samarasekera
	France	Ecole Polytechnique	President Xavier Michel
	France	Université Paris-Sorbonne (Paris IV)	President Georges Molinié
	Germany	LMU Munich	President Bernd Huber
	Germany	RWTH Aachen University	Rector Burkhard Rauhut
	Italy	Politecnico di Torino	Rector Francesco Profumo
	Italy	Università degli Studi di Firenze	Vice-Rector Guido Chelazzi
	Japan	Doshisha University	President Eiji Hatta
	Japan	Hitotsubashi University	President Takehiko Sugiyama
	Japan	Hokkaido University	President Hiroshi Saeki
	Japan	Keio University	President Yuichiro Anzai
	Japan	Kyoto University	President Kazuo Oike
	Japan	Kyushu University	President Tisato Kajiyama
	Japan	Nagoya University	President Shin-ichi Hirano
	Japan	Osaka University	President Kiyokazu Washida
	Japan	Ritsumeikan University	President Kiyofumi Kawaguchi
	Japan	The University of Tokyo	President Hiroshi Komiyama
	Japan	Tohoku University	President Akihisa Inoue

	Japan	Tokyo Institute of Technology	President Kenichi Iga
	Japan	Tokyo Metropolitan University	President Jun-ichi Nishizawa
	Japan	Waseda University	President Katsuhiko Shirai
	U.K.	Imperial College London	Pro-Rector Mary Ritter
	U.K.	The University of Cambridge	Prof. Peter Guthrie, Director, Centre of Engineering for Sustainable Development
	U.S.A.	University of California, Los Angeles	Chancellor Gene D. Block
	U.S.A.	Yale University	Mr. Donald Filer, Director, the Office of International Affairs

Other Countries	Australia	The Australian National University	Vice-Chancellor and President Ian Chubb
	Brazil	University of São Paulo	Prof. Carlos Clemente Cerri, Center of Nuclear Energy in Agriculture
	China	Peking University	Executive Vice-President and Provost Jianhua Lin
	China	Tsinghua University	Vice President Weihe Xie
	India	Indian Institute of Technology, Kanpur	Deputy Director Kripa Shanker
	Korea (Rep. of)	Seoul National University	President Jang-Moo Lee
	South Africa	University of Johannesburg	Vice-Chancellor and Principal Ihron L Rensburg
	International Organization	United Nations University	Rector Konrad Osterwalder

Explanation of the Purpose of Parallel Session A "New Scientific Knowledge and International Network to Support Global Sustainability" (Speech from the Plenary Session)

Hiroshi Saeki,
Vice-Chair of the Plenary Session
Chair of the Parallel Session A

As Dr. Komiyama mentioned in the "Opening remarks", we will discuss *New Scientific Knowledge and International Networks to Support Global Sustainability* at Parallel Session A. In this regard, I would like to explain matters that I hope will be discussed at this session while introducing the experiences of Hokkaido University, which has actively pursued sustainability programs based on fieldwork since its inception as Sapporo Agricultural College about 130 years ago.

Establishment of new scientific knowledge

First of all, I would like to touch upon the establishment of new scientific knowledge.

In addressing the challenge of establishing a sustainable global society – a challenge common to all humanity – universities, which assume a responsibility for knowledge creation to serve as a resource for solutions, should embark on research activities while recognizing the complexity of problems and the existence of challenges that defy existing academic disciplines.

Responses to the complexity of problems

As an example, it is well known that the use of ethanol as a fuel to mitigate global warming has sent the price of food such as corn and soybeans through the roof. There are many such cases in which action that was expected to help create a sustainable society has in fact caused adverse effects or negative side effects elsewhere. Since the problems at hand form a convoluted web, scientists will need to gain a structural understanding of the relationships involved using scientific knowledge in other fields as well as their own areas of expertise, and to tackle problems from a comprehensive perspective to avoid negative side effects.

With this in mind, I would like to introduce two initiatives that Hokkaido University has launched in the field of sustainability.

Firstly, let us look at the Sustainability Weeks.

Taking the moves of the United Nations and other institutions into account, Hokkaido University inaugurated the Hokkaido University Initiative for Sustainable Development (HUISD) in 2005 with the aim of intensifying its efforts to contribute to sustainable development. Since 2006, we have held annual Sustainability Weeks during which we intensively host international symposiums and outreach programs highlighting research and educational programs toward the realization of a sustainable society.

This year, we have designated the three weeks from June 23 through July 11 as the Sustainability Weeks period, and are holding approximately 50 events including pre-events. These sessions provide researchers with opportunities to readily learn about research programs relating to sustainability in other fields. As a result, researchers in public policy, economy and sanitary engineering, for example, have launched collaborative research programs to study waste and waste water treatment from various angles.

Secondly, we have established the Center for Sustainability Science.

Hokkaido University established the Center for Sustainability Science in April this year with aim of developing projects promoted as part of the Integrated Research System for Sustainability Science (IR3S), which Dr. Komiyama mentioned before. Another key aim is to foster experts who have mastered their areas of expertise and can understand the importance of creating a sustainable society and look at social problems from a comprehensive viewpoint. While providing inter-departmental graduate study, the center also develops curricula to enable conventional knowledge, which is vertically divided and fragmented, to be offered in a comprehensive manner in cooperation with eight graduate schools at Hokkaido University.

Responses to challenges that defy existing academic disciplines

To handle diseases that affect both animals and humans (such as influenza, Severe Acute Respiratory Syndrome (SARS) and Bovine Spongiform Encephalopathy (BSE)), Hokkaido University established the Research Center for Zoonosis Control in April 2005. Until the establishment of this center, areas of research into infectious diseases were vertically segmented: human diseases were handled by medicine, animal diseases by veterinary medicine and the ecology of animals by ecological science. This meant that there was no foundation for elucidating on routes that allow pathogenic microbes parasitizing wildlife to be transmitted to livestock, poultry and animals or for studying measures to prevent infections from spreading. Against this backdrop, we established the world's first research center to carry out comprehensive studies on these diseases and establish a new academic discipline where the urgent task common to all humanity, i.e. zoonosis, will be tackled in a comprehensive manner.

Such initiatives that are aimed at consolidating knowledge from a range of fields (as opposed to the previous norm of acting independently) encourage researchers to recognize the mutual relationships between their own fields of expertise and other fields, enabling them to conduct research with a broader perspective. This leads to the creation of new scientific knowledge.

Establishment of international research networks

I believe that programs and initiatives like the ones I have just introduced should be promoted not only across the campus of each university, but also nationwide and across national boundaries. In this regard, I would like to talk about the establishment of international research networks.

International cooperation on a university level has so far generally been between pairs of universities. Recent trends, however, have seen more multi-campus cooperation (networks). There are many cases that illustrate this; to highlight only those that Japanese universities are involved in, examples include the International Association of Universities (IAU), The Association of East Asian Research Universities (AEARU), the Association of Pacific Rim Universities (APRU) and Academic Consortium 21 (AC21).

While these networks are general in nature and cover a wide range of fields, there are also many university networks with more specialized fields, regions and activity programs.

Hokkaido University's major sustainability-related university networks
An example of Hokkaido University's contribution to the establishment and reinforced functions of sustainability networks is outlined below.

*Participation in the International Antarctic Institute (IAI)
In 2007, the International Antarctic Institute (IAI) was established with the participation of 17 universities in 12 countries aiming to mutually offer graduate courses in antarctic science. As one of its founding members, Hokkaido University has also worked to improve international curriculums concerning cryosphere science and to promote research programs.

*Participation in ProSPER.NET
In addition, a consortium of universities in the Asia-Pacific region aiming to promote graduate education for sustainable development (ProSPER.Net), a concept discussed primarily at the United Nations University – Institute of Advanced Studies (UNU-IAS), was recently inaugurated (June 21, 2008). Hokkaido University made an active contribution to the establishment of ProSPER.Net, and co-hosted its signing ceremony and related symposiums in Sapporo.

While these networks are centered on education rather than research programs, there is no doubt that international research networks are important in establishing a sustainable global society. As an example, at the Academia Summit held in Beijing between Japan and China under the auspices of the Japan Society for the Promotion of Science (JSPS) in March this year, it was suggested that research networks in East Asia would be necessary for sustainable development. It goes without saying that it is imperative for us to develop research networks beyond East Asia to include other regions.

However, to establish a sustainable global society, it is vital to reinforce the practical functions of individual international research networks rather than simply establishing many such networks in various regions or academic disciplines. According to our experience through the activities of the Hokkaido University Initiative for Sustainable Development (HUISD) established by the university in 2005, the development of an infrastructure designed to connect networks of on-campus researcher groups proves effective in terms of the

fostering of new partnerships and scientific knowledge. This has been successful because we have established a campus-wide interface concerning sustainability, which has been effective in coordinating work across the campus. When establishing a collection of various independent networks, the creation of a synergetic effect is essential. To this end, it is expected that every university will establish a sustainability center similar to those already put in place by several universities, including those at Hokkaido University, the University of Tokyo and the University of Cambridge, and that these centers will play a vital role in connecting networks.

I believe that universities, countries and regions are implementing a range of programs to consolidate knowledge and establish new scientific understanding as well as international research networks toward the development of a sustainable global society. I hope that Parallel Session A will help to shed light on the programs that are underway in various universities, countries and regions. I also hope that, based on this information, we will be able to discuss the direction that universities should take and the roles they should assume in the future, as well as the elements necessary to make the most of the infrastructure that will connect international research networks.

Summary of the Parallel Session A "New Scientific Knowledge and International Network to Support Global Sustainability"

Indira Samarasekera,
Vice-Chair of the Parallel Session A

The topic of this session was New Scientific Knowledge and Scientific Networks to Support Global Sustainability

The most widely understood definition of sustainability emerged as "a development which meets the needs of present generations using the finite resources on the earth without compromising the ability of future generations to satisfy their needs"

President Jang Moo Li, SNU, had the most comprehensive definition of a sustainable society which included the following:

- Development of human abilities
- Economic vitality
- Social equality
- Environmental conservation

These ideas resonated with those of other Presidents from developing countries such as China, India and Africa where the need to balance environmental sustainability against alleviation of poverty and providing educational opportunities for the millions who are currently disenfranchised are important considerations.

In the context of sustainability as previously defined, several global challenges were identified.

- Climate change
- Energy security
- Resource use and depletion

- Eliminate poverty and improve living standards
- Access to education for the underprivileged and those who are living the developing world
- Responsibility to future generations
- Health
- Air, Water and Land pollution

To meet these global challenges President Rauhut, Aachen University, correctly identified the following requirements:

- More fundamental understanding
- More cooperation among disciplines and partners
- Awareness and ability of students and staff to meet global challenges
- Appropriate governance

In the context of this framework – what is the role of universities?

This was well defined by Donald Filer of Yale University as follows:

- Continue to advance the science of climate change, develop alternative energy and transport technologies, to which I would add, the science required to assist in the solution of all global challenges related to sustainability –
    - Climate change
    - Energy security
    - Resource use and depletion
    - Eliminate poverty and improve living standards
    - Responsibility to future generations
    - Access to education for the underprivileged and those who are living the developing world
    - Health
    - Air, Water and Land pollution

Many commented on global urgency of arriving at new knowledge to solve these global challenges but expressed the need for robust scientific evidence given the intense scrutiny to which new knowledge is being subjected.

There is also a danger that the scientific knowledge could be translated into advice and policy well beyond the scientific confidence levels.

One of the challenges of shortening timescales between discovery and exploitation are the risks that could arise by the application of science where the unintended consequences are adverse.

For example, biofuels vs. the global demand for food supplies; environmental regulation vs. economic growth and poverty; the harnessing of hydroelectric energy vs. long term ecological damage.

In addition to the discovery of new knowledge and its application to global sustainability another role of universities is,

- Educate future citizens and leaders
- Demonstrate that sustainable campuses are possible and relatively inexpensive

Let us now turn to the first item that is the creation of new scientific knowledge to address the challenges of global sustainability.

All of the presenters referred to the importance of interdisciplinary research in solving complex problems while recognizing the importance of a strong disciplinary background.

President Kenichi Iga from the Tokyo Institute of Technology, in particular emphasized the importance of science and technology and its role in innovation and identified the university's responsibility to disseminate and inform the public on what the university's outcomes are – innovative methods, tools and technologies.

Examples of interdisciplinary initiatives for a number of universities include the following:

- Centre for Energy Studies
- Multidisciplinary Programs on Environmental Economics
- Integrated Water Management
- Recycling oriented communities
- Asian Institute for Energy, Environment and Sustainability
- Institute for Social Development and Policy Research
- Rainwater Research Centre
- School of Urban and Environmental Science
- Biodiversity and Sustainable Lifestyle
- Global change ecology, vegetation and ecological remote sensing
- Renewable Energy
- Industrial Sustainability
- Tailor made fuels and biomass
- Sustainable Water Management

Next item, education was also identified as an important element for global sustainability. Vice-Chancellor Rensburg from University of Johannesburg persuasively argued for the role of education and knowledge for Africa.

To quote " There cannot be a sustainable planet if Africa is marginalized economically, socially and through lack of knowledge capabilities and it is morally vital and strategically important to integrate Africa into the global body of scientific knowledge."

The Rector of Aachen spoke to the importance for the students to see first hand global challenges as an important component of their education.

Another point that was raised in connection to providing educational opportunities for students and addressing global sustainability was the importance of partnership with industry and government.

Several universities have partnerships with industry either by involving industry in defining and solving problems or by having industry co-locate on university campuses.

Several speakers also identified the role of universities in demonstrating sustainable development through initiatives on their own campuses.

Yale University in particular spoke extensively about modeling environmental practice by setting goals for reduction of GHG, by becoming more energy efficient, aiming for LEED silver or gold specifications for new buildings, as a means of demonstrating leadership in sustainability for the next generation.

Peking University's efforts at maintaining the original vegetation on its campus is impressive given that it is home to many species of birds, plants, fish and mammals. The university plans to establish standards for new building materials and architectural design with the view to a sustainable society.

The final area for which there was considerable discussion of the role of networks and the importance of network of networks.

There was considerable discussion on the need for networks which are as follows:

The challenges are global and complex and require the cooperation of academia, business and government beyond the borders of one country which can be accomplished through networking.

Collaborative efforts at national, regional and international are required hence the need for networks at all levels.

The scientific knowledge should be translated into solutions for problems. Networks could help harness the knowledge and disseminate it to governments and industry to solve problems.

There is an absence of a database for an effective network on sustainability. This could serve as a platform for interaction and be open to society worldwide.

Large networks are not necessarily better as compared to smaller networks that involve researchers that are tackling specific issues.

Networks that exist today among institutions tend to be universities that have similarities and there may be great value in linking institutions that are significantly different from each other to enhance cross fertilization of ideas.

It is important for networks to establish what their objectives and outcomes are and facilitate the exchange of students, staff and faculty. Include the development of joint programs of research, provide access to educational materials and to counter brain drain through brain circulation.

The G8 could encourage the formation of regional networks which focus specifically on challenges on a given region on global sustainability but then create a network of regional networks that would help formulate solutions to over arching common global issues.

And finally, for Africa, where there is an absence of critical mass or capacity universities such as the University of Johannesburg could serve as a conduit between other global networks and Africa.

In closing, I would like to raise two questions posed by President Kenichi Iga for further discussion:

1. What are the possible obstacles hampering the promotion of network of networks?
2. What can be a concrete tool to create feasible and effective network of networks?

Explanation of the Purpose of Parallel Session B "Knowledge Innovation towards Global Sustainability and Education" (Speech from the Plenary Session)

Yuichiro Anzai
Vice-Chair of the Plenary Session
Chair of the Parallel Session B

Thank you, Chairman Komiyama. I am Yuichiro Anzai, President of Keio University in Tokyo. It is a great pleasure for me to chair Parallel Session B this afternoon. The topic of the session is "Knowledge Innovation towards Global Sustainability and Education."

While Parallel Session A will discuss specific sustainability issues, this session will focus more upon the key functions that are the responsibility of the university in its role as an incubator of innovation. Universities are expected to make very significant contributions to society through the generation of research outcomes that can be termed "Knowledge Innovation." As we face critical issues, such as climate change caused by global warming and other environmental factors, we as universities must collaborate and address issues of global concern, overcoming geographical differences, and in some cases, sharing the most cutting-edge innovations, so as to contribute to global sustainability.

It is therefore very important that university leaders get together in this way to share their most innovative activities and good practices.

Keio University has recently started various initiatives that address environmental issues, and that foster innovative solutions for coping with them. Earlier this month, we held an Environmental Symposium in which top researchers from throughout the university participated. We were able to collect and share knowledge generated in diverse academic fields, ranging from environmental economics, international environmental policy, environmental public health, anti-air pollution technology, environmental and pharmaceutical sciences, and total systems management for environmentally graceful

architecture and social infrastructure, to address common issues relating to the environment. We also took that opportunity to recognize the contribution to global-scale issues of renowned humanitarian, environmental activist, and musician, Bono of U2, conferring upon him an honorary degree coinciding with the symposium. We were very fortunate to have him deliver an inspirational speech on this topic to students and faculty.

I expect that each university represented here today, coming from both G8 nations and outreach countries, is highly research intensive, and has many outstanding achievements and good practices relating to Knowledge Innovation. I therefore look forward to hearing from all of you about your initiatives.

It is essential for university leaders to discuss the importance of new initiatives in education. Japan proposed that the United Nations declare a "Decade of Education for Sustainable Development," which was approved at the 57th United Nations General Assembly in 2002, and began in 2005. Knowledge Innovation is only possible through the efforts of capable and committed researchers who generate research outcomes leading to innovation. It is after all only human beings that can engage in and promote Knowledge Innovation and in that sense, education of the future generation is an issue of crucial importance for the future sustainability of our world.

Keio University published a 2008 White Paper on our activities that contribute to sustainable environments, safety, and health at the university.

Data in the White Paper shows the progress made between 2005 and 2006 on all campuses, including the university hospital, to reduce the university's environmental impact. These included:

- 1.5% reduction in CO_2 emissions
- 1.8% reduction in energy consumption (including 6.8% reduction in gas, 6% reduction in water, and 0.4% increase in electricity)
- 3.8% reduction of waste
- 3.1% increase in recycling

Taking advantage of the 150th anniversary of its founding in 2008, Keio has launched many initiatives that promote new education activities and research innovation.

For example, we launched two new graduate schools this academic year, with the purpose of educating future leaders in large scale system management. The focus of the Graduate School of System Design and Management is on nurturing leaders with the skills to combat environmental issues. The Graduate School of Media Design's emphasis is on educating tomorrow's creative leaders in media and design, including new information technologies, which is directly related to the distribution and sharing of knowledge.

I believe this is one of many examples that we will hear about from universities participating in this session. There should be ample time for discussion following each presentation, and I really hope that each of us can take away something valuable about what other institutions are doing to educate future leaders and promote global sustainability through education.

Thank you.

Summary of the Parallel Session B "Knowledge Innovation towards Global Sustainability and Education"

Francesco Profumo
Vice-Chair of the Parallel Session B

1. President Kazuo Oike, Kyoto University, introduced the basic idea of lithospheric sciences and introduced relevant and important activities conducted at Kyoto University, both at research and educational level.

2. President Georges Molinié, Université Paris Sorbonne (Paris IV), emphasized the crucial role of humanities and social sciences to define what "sustainability" and "equality" are: economic problems, political consideration and social reforms are strictly connected.

3. Pro-Rector Mary Ritter, Imperial College London, stressed the importance of sharing the outcomes of scientific research at educational level, including Master, PhD and Postdoctoral, to provide graduates with skills that match employers' needs and citizens capable of acting in a global environment.

4. Chancellor Gene Block, University of California Los Angeles, explained that UCLA is now taking leadership in working across disciplinary boundaries, bridging campus and community, forming institutional partnerships and building links with business and industry. Chancellor Block, while supporting the idea for a network of networks, proposed the creation of a new international institution.

5. President Katsuhiko Shirai, Waseda University, emphasized the need of sharing a roadmap to attain global sustainability. In fact Waseda participates in multi-lateral consortium, government-industry-academia alliance, to create a new research and education model to nurture leaders willing to challenge global issues.

6. Vice-Chancellor Ian Chubb, The Australian National University, suggested that so far universities did not succeed in shaping future leaders. A multidisciplinary education approach should be pursued to make students aware of moral and world issues and able to address global constraints and find solutions.

7. Professor Carlos Clemente Cerri, Universidade de São Paulo, explained the results of his university energy efficiency program, based on solar energy panels and bio-generators, that allowed significant energy savings and cost reduction. The project is considered a national level benchmark in Brazil.

8. Vice-President Weihe Xie, Tsinghua University, proposed three actions to be taken within 2010 G8 Summit:

a) Establish a foundation at university level for knowledge innovation
b) Award best 50 university proposals towards global sustainability
c) Establish an eminent professors panel to provide advice dealing with emergencies.

9. President Shin-ichi Hirano, Nagoya University, described his university policy to attain a sustainable development on campus based on a multidisciplinary approach, which emphasizes students' continuous engagement and outreaches to local communities and society as a whole, and takes in account the economical impact and its relationship with industrial environment.

10. President Kiyokazu Washida, Osaka University, quoted an old Japanese proverb - "taru wo shiru", or " be aware when your want is met" - suggesting that satisfying desires may not be the only way: "sufficiency in insufficiency" is the ideal attitude of citizens from a philosopher's point of view. Part of university education should be to nurture people who are able to bridge specialists and society.

11. President Eiji Hatta, Doshisha University, introduced the "Students G8 Summit of Sustainability"'s outcome, the principle of three C's: conserve, create and collaborate as an enabler of international students networking.

During the open discussions the following points were raised:

- Sustainability should be discussed along with poverty alleviation.
- Education to global sustainability should start ahead of students entering university.
- Engagement of universities with public authorities should be encouraged to the benefit of local communities.
- Adoption by universities of international frameworks to overcome administrative barriers in students and staff's mobility. This is the only way to get internationalization process work.
- Tyranny of content in current educational systems should be limited. An example comes from British Columbia that has taken a specific initiative based on new technologies for undergraduate education.
- Service learning, which includes students working in the communities, may indeed have an effect on leadership education. Examples were given from Imperial College, Politecnico di Torino, Tsinghua and Waseda University. Special joint summer school with automotive industries in Japan tailored for international students were also mentioned.
- Qualities expected from leaders should be defined and cleared.
- Teaching to students is not the only area that universities can work on sustainability, but is an important one.

Outcomes of the session

Looking forward "2009 G8 Summit of Universities" it's important to engage participants universities into a virtual network of information exchange (perhaps based on the architecture in place at University of British Columbia) that should assess:

- the values of multidisciplinary approach
  (including a rethinking of curricula and education to ethics, market and social needs);
- the issue of internationalization of universities
  (including students and staff's mobility);
- the economical environment
  (that may change significantly impacting actual way of life, both in rich and poor countries);

A final suggestion was made to the opportunity of merging the "G8 of Universities " with the "G8 of Scientific Research" to strengthen one the underlying missions of universities that is to create, spill-over and disseminate knowledge.

Scenery from the G8 University Summit

The G8 University Summit：
（Venue：Sapporo, during June 29 to July 1, 2008）

The G8 University Summit was held during June 29 to July 1, 2008 sponsored by MEXT, hosted by the Organizing Committee consists of 14 Japanese universities. The participating universities of the G8 University Summit were from 14 countries, 1 international organization and 35 universities.

Please refer to the Participating Universities of the G8 University Summit, Program, Sapporo Sustainability Declaration(SSD) for further details.

- 1.Welcome Party
- 2. Opening Ceremony
- 3. Parallel Session A
- 4. Parallel Session B
- 5. Reception
- 6. Plenary Session
- 7. Closing Session
- 8. Press Conference
- 9. Farewell Lunch
- 10. Excursion

1. Welcome Party: June 29, Keio Plaza Hotel Sapporo

Hokkaido University and the Hokkaido Toyako Summit Preparation Council jointly hosted a welcome party with the aim of deepening friendship among the summit's participants. Executive and Vice-President Takeo Hondoh of Hokkaido University, who served as Deputy Director of the Secretariat, also acted as MC at the event.

Executive and Vice-President Hondoh, Hokkaido University, serves as MC

Welcome party

President Hiroshi Saeki of Hokkaido University, who served as Deputy Chair of the Organizing Committee and Executive Director of the Secretariat, gave welcome remarks on behalf of the organizer. Vice Governor of Hokkaido Mr. Noboru Arashida read a message at the opening of the G8 University Summit from Governor of Hokkaido, Ms. Harumi Takahashi, who was chairperson of the Hokkaido Toyako Summit Preparation Council.

President Saeki, Hokkaido University

Vice Governor of Hokkaido Mr. Arashida

Next, Mr. Kisaburo Tokai, Minister of Education, Culture, Sports, Science and Technology, delivered a congratulatory speech, and Mr. Iwao Takamuki, President of the Federation of Hokkaido Chamber of Commerce and Industry and Vice-Chairperson of the Hokkaido Toyako Summit Preparation Council, proposed a toast.

Mr. Tokai, Minister of Education, Culture, Sports, Science and Technology

Mr. Takamuki, President of the Federation of Hokkaido Chamber of Commerce and Industry

Following cordial talks among the participants, speeches were delivered by Mr. Fumio Ueda, Mayor of Sapporo and Vice-Chairperson of the Hokkaido Toyako Summit Preparation Council, and President Hiroshi Komiyama of the University of Tokyo, who served as Chair of the Organizing Committee.

Mr. Ueda, Mayor of Sapporo

President Komiyama of the University of Tokyo

Mr. Fumio Kondo, General Manager, Executive Office, Teijin Limited, presented eco-friendly bags for use at the conference to President Hiroshi Saeki of Hokkaido University, who served as Executive Director of the Secretariat.

Left photo: Mr. Fumio Kondo, General Manager, Executive Office, Teijin Limited; Right photo: President Saeki of Hokkaido University

The welcome party was brought to an end with a toast by President Yuichiro Anzai of Keio University, who served as Deputy Chair of the Organizing Committee.

President Yuichiro Anzai of Keio University

2. Opening Ceremony： June 30, 2008 9:00 to 12:00

The G8 University Summit has been inaugurated at Keio Plaza Hotel, Sapporo, Hokkaido, Japan on June 30, 2008.

President Komiyama of the University of Tokyo has made the opening remarks on the Opening Ceremony.
Followed by the congratulatory message to the G8 University Summit has been given by Prime Minister Fukuda and Minister Tokai of MEXT.

After the introduction of the participants of the meeting, the Chairs and Vice-Chair of the Plenary Session and Parallel Sessions has been approved as follows:

- Chair of the Plenary Session
  President Hiroshi Komiyama, the University of Tokyo
- Vice-Chair of the Plenary Session and Chair of the Parallel Session A
  President Hiroshi Saeki, Hokkaido University
- Vice-Chair of the Parallel Session and Chair of the Parallel Session B
  President Yuichiro Anzai, Keio University
- Vice-Chair of the Parallel Session A
  President and Vice-Chancellor Indira V. Samarasekera, University of Alberta
- Vice-Chair of the Parallel Session B
  Rector Francesco Profumo, Politecnico di Torino

Explanation of each session has been made by the Chairs of the Sessions.

President Hiroshi Komiyama, the University of Tokyo

President Hiroshi Saeki, Hokkaido University

President Yuichiro Anzai, Keio University

Presentations by the 5 universities (Kyushu University,the University of British Columbia (Canada), Ecole Polytechnique (France), LMU Munich (Germany) and Far Eastern National University (Russia) has given their speech at the Plenary Sessions.

Kyushu University,
President Tisato Kajiyama

the British Columbia,
President and Vice-Chancellor
Stephen J. Toope(Canada)

Ecole Polytechnique,

President Xavier Michel(France)

LMU Munich,

President Bernd Huber（Germany）

Far Eastern National University,

President Vladimir Kurilov (Russia)

3. Parallel Session A: June 30, 13:00 – 17:30

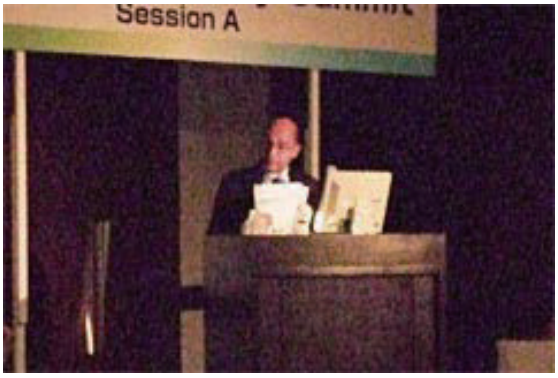
Theme: New Scientific Knowledge and International Network to Support Global Sustainability

Sub-themes: ・New Scientific Knowledge on Global Sustainability
・Network of Networks (NNs)

Led by its chair (President Hiroshi Saeki of Hokkaido University) and vice-chair (President and Vice-Chancellor Samarasekera of University of Alberta), Parallel Session A included presentations by the representatives detailed below, comments about the presentations and questions & answers on the theme of 'New Scientific Knowledge and International Network to Support Global Sustainability'.

The session was divided into first and second halves, and featured presentations by the ten representatives listed below.

President Takehiko Sugiyama,
Hitotsubashi University



Vice-Rector Guido Chelazzi,
Università degli Studi di Firenze

Prof. Peter Guthrie, Director,
Center of Engineering for Sustainable Development,
the University of Cambridge

Mr. Donald Filer, Director, Office of International Affairs,
Yale University

Executive Vice-President
and Provost Jianhua Lin,
Peking University

President Jun-ichi Nishizawa,
Tokyo Metropolitan University

Deputy Director Kripa Shanker,
Indian Institute of Technology, Kanpur

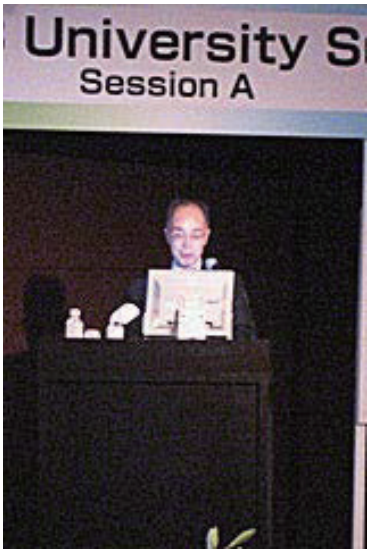
President Jang-Moo Lee,
Seoul National University

Vice-Chancellor and Principal Ihron L. Rensburg, University of Johannesburg

Rector Burkhard Rauhut, RWTH Aachen University

The presentations were followed by comments from the three representatives listed below.

President Akihisa Inoue, Tohoku University



President Kenichi Iga, Tokyo Institute of Technology

President Kiyofumi Kawaguchi, Ritsumeikan University

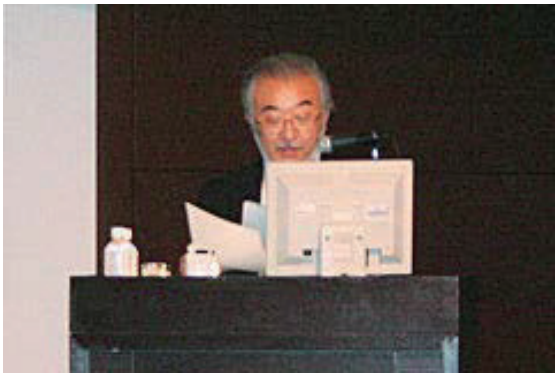
4. Parallel Session B: June 30, 13:00 – 17:30

Theme: Knowledge Innovation towards Global Sustainability and Education

Sub-themes: ・Knowledge Innovation as a Trigger for Social Reform
・For Global Sustainability of the Next Generations – Education

With its chair (President Yuichiro Anzai of Keio University) and vice-chair (Rector Francesco Profumo of Politecnico di Torino) at the helm, Parallel Session B was held on the theme of 'Knowledge Innovation towards Global Sustainability and Education'. The representatives listed below made presentations, which were followed by comments and question-and-answer sessions.

A total of eight representatives (below) made presentations in the first and second halves of the session.



President Kazuo Oike,
Kyoto University

President Georges Molinié,
Université Paris-Sorbonne (Paris IV)

Pro-Rector Mary Ritter,
Imperial College London

Chancellor Gene D. Block,
University of California, Los Angeles

President Katsuhiko Shirai,
Waseda University

Vice-Chancellor and President Ian Chubb,
The Australian National University

Prof. Carlos Clemente Cerri,
University of São Paulo

Vice President Weihe Xie,
Tsinghua University

Following the presentations, the three representatives listed below made comments.

President Shin-ichi Hirano, Nagoya University

President Kiyokazu Washida, Osaka University

President Eiji Hatta, Doshisha University

5. Reception Hosted by the G8 University Summit Organizing Committee

A reception hosted by the G8 University Summit Organizing Committee was held at the JR Tower Hotel Nikko Sapporo's Taiyou Sky Banquet Room on the 36th floor.
Following a few words from President Hiroshi Komiyama of the University of Tokyo, Mr. Isao Kiso, Director-General for International Affairs at the Ministry of Education, Culture, Sports, Science and Technology (MEXT) delivered a guest speech. This was followed by a toast from President Yuichiro Anzai of Keio University, who served as Deputy Chair of the Organizing Committee.

After a spell of interaction between the attendees, a performance of the koto (a traditional Japanese stringed musical instrument) was given as an introduction to Japanese culture. A member of the Hokkaido University International Women's Club (Ms. Shuho Arikawa) and her teacher Ms. Koshu Oyama from the Ikuta-ryu played a song called Rokudan no Shirabe.

Ms. Oyama and Ms. Arikawa give a koto performance while attendees listen

The reception was brought to a close with a toast by Hokkaido University President Saeki.

6. Plenary Session: July 1, 2008, 9:00 – 11:30

Following the preceding day's presentations, comments and discussions during the Parallel Sessions, the Plenary Session was held under the guidance of the chair of the Organizing Committee (President Hiroshi Komiyama of the University of Tokyo).

The chair (President Hiroshi Saeki of Hokkaido University) and vice-chair (President and Vice-Chancellor Indira V. Samarasekera of University of Albrerta) of Session A and their Session B counterparts (President Yuichiro Anzai of Keio University and Rector Francesco Profumo of Politecnico di Torino, respectively) presented summaries of their sessions.

Next, Rector Konrad Osterwalder of United Nations University made comments on the sessions as a whole.

The Sapporo Sustainability Declaration was adopted, and it was agreed that the second G8 University Summit would be held in Italy, the host country of the G8 Summit in 2009.

The Chair of the Organizing Committee (President Hiroshi Komiyama of University of Tokyo) and the Executive Director of the Secretariat (President Hiroshi Saeki of Hokkaido University) expressed their gratitude to the participating presidents and rectors.
At the end of the event, President Komiyama explained that members of the Secretariat of the Organizing Committee would visit the office of Prime Minister Yasuo Fukuda in the near future to deliver the 'Sapporo Sustainability Declaration' and make a report on the G8 University Summit.

7. Closing Ceremony

The G8 University Summit has successfully closed after the Plenary and Parallel Sessions on July 1, 2008. At the Closing Session, ‘ Sapporo Sustainability Declaration (SSD)’ has been adopted.

8. Press Conference

From 11:30, the press conference has been held to announce the report of the G8 University Summit as well as releasing the outline of the ‘ Sapporo Sustainability Declaration (SSD)’.

Participants of the Press Conference

- Chair of the Plenary Session
  President Hiroshi Komiyama, the University of Tokyo
- Vice-Chair of the Plenary Session and Chair of the Parallel Session A
  President Hiroshi Saeki, Hokkaido University
- Vice-Chair of the Plenary Session and Chair of the Parallel Session B
  President Yuichiro Anzai, Keio University
- Vice-Chair of the Parallel Session A
  President and Vice-Chancellor Indira V. Samarasekera, University of Alberta
- Vice-Chair of the Parallel Session B
  Rector Francesco Profumo, Politecnico di Torino

The G8 University Summit
June 30 – July 1, 2008, Sapporo, Hokkaido

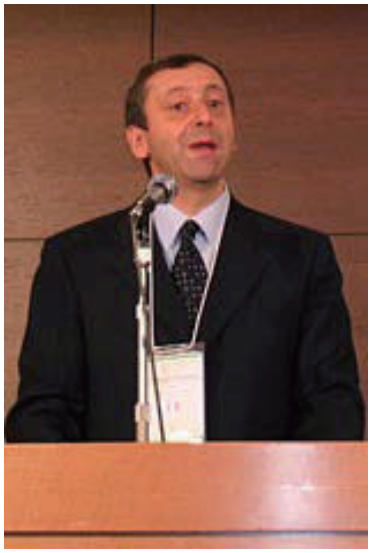
The G8 University Summit

9. Farewell Lunch

Following an organizer's address by President Hiroshi Komiyama of the University of Tokyo, a speech was delivered by Mr. Kimito Kubo, Deputy Director-General of the Higher Education Bureau at the Ministry of Education, Culture, Sports, Science and Technology (MEXT). Rector Francesco Profumo of Plitecnico di Torino also made a speech as representative of the invited university presidents.

President Komiyama of the University of Tokyo (Chair of the Organizing Committee)

Mr. Kubo, Deputy Director-General of the Higher Education Bureau, MEXT



Rector Profumo of Politecnico di Torino, representative of the invited university presidents

The Presidents of three Universities who hosted the G8 University Summit
From left: President Anzai of Keio University (Deputy Chair of the Organizing Committee), President Komiyama of the University of Tokyo (Chair of the Organizing Committee), President Saeki of Hokkaido University (Deputy Chair of the Organizing Committee, Executive Director of the Secretariat)

10. Excursion

Participants visited the Hokkaido University Museum, Mt. Okura and Moerenuma Park during the excursion (an inspection tour of areas considered to be advanced in terms of environmental conservation measures).

Attendees visited the Hokkaido University Museum, where their observation centered around an exhibition planned in conjunction with the 2008 G8 Hokkaido Toyako Summit titled 'Environment and Resources of Lake Toya and Usu Volcano Area'. This exhibition prompted them to consider ways to conserve the natural environment and realize a sustainable society that exists in harmony with it.

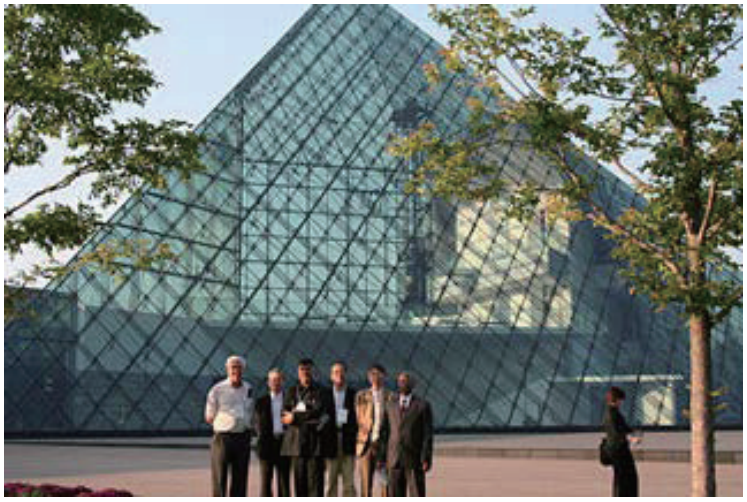
Participants observe exhibits and listen to explanations

Next, they visited Mt. Okura, which commands panoramic views of Sapporo.

On the last leg of their inspection tour, the attendees visited Moerenuma Park. The space was developed on the site of a former waste treatment plant, and is the core park in the city's northeastern area under the Sapporo Circular Greenbelt Concept. The structures in the park were designed by sculptor Isamu Noguchi.

In a conference room in the park's Glass Pyramid 'Hidamari (sunny spot)', the visitors saw videos and listened to explanations giving an overview of the park and the snow cooling system. They also observed the snow storage area for the cooling system.

Participants asked numerous questions on matters such as the city's snowfall, the costs of snow transportation and the overheads of maintaining the park.



In front of the Glass Pyramid

Organizing Committee Members

Hiroshi Komiyama, President, The University of Tokyo (Chair)

Hiroshi Saeki, President, Hokkaido University (Deputy Chair)

Yuichiro Anzai, President, Keio University (Deputy Chair)

Eiji Hatta, President, Doshisha University

Takehiko Sugiyama, President, Hitotsubashi University

Kazuo Oike, President, Kyoto University

Tisato Kajiyama, President, Kyushu University

Shin-ichi Hirano, President, Nagoya University

Kiyokazu Washida, President, Osaka University

Kiyofumi Kawaguchi, President, Ritsumeikan University

Akihisa Inoue, President, Tohoku University

Kenichi Iga, President, Tokyo Institute of Technology

Junichi Nishizawa, President, Tokyo Metropolitan University

Katsuhiko Shirai, President, Waseda University

Secretariat Members

Hiroshi Saeki, Executive Director
(President, Hokkaido University)

Makoto Asashima, Deputy Director
(Executive Vice-President, The University of Tokyo)

Takeo Hondoh, Deputy Director
(Vice-President for International Affairs, Hokkaido University)

Tatsuya Sakamoto, Deputy Director
(Vice-President for International Collaboration & Education, Keio University)

Result of the G8 University Summit

July 4, 2008

The G8 University Summit was held for the first time in history in Sapporo from June 29 to July 1, 2008. Through this summit, each university recognized the investigation and research for achieving the sustainability of the Earth and the roles of universities, such as education, promised to take voluntary measures for achieving the sustainability, and adopted "Sapporo Sustainability Declaration" for promoting the leaders participating in the G8 Hokkaido Toyako Summit to take actions, such as to implement scientific and appropriate measures for tackling the climate change issue, as part of their efforts for coping with urgent global-scale problems.

This G8 University Summit was hosted by the G8 University Summit Organizing Committee, which is composed of members from 14 universities in Japan and chaired by President Hiroshi Komiyama of the University of Tokyo, under the theme of "Global Sustainability and Roles of Universities." The number of participants was about 140, including presidents, chancellors, and representatives (Presidents) of 34 universities in 14 G8 and non-G8 countries and United Nations University. The Presidents agreed upon holding the next G8 University Summit in Italy in 2009 and will keep efforts for promoting other universities and governments to take measures for the sustainability of the Earth.

1. Purpose of the G8 University Summit
2. Universities Participated
3. Outline and results of the G8 University Summit
4. Date and Venue
5. Organization
6. Follow-up

1. Purpose of the G8 University Summit

It was the first time in history for the presidents of major universities in G8 and other countries to convene a G8 University Summit conference to discuss pressing international issues from the academic and neutral viewpoints.

In parallel with the G8 Hokkaido Toyako Summit, the presidents of 35 universities (the presidents of 27 universities including United Nations University, and deputy presidents from 8 universities) from a total of 14 countries participated in this summit, with the purpose of discussing what universities should do to achieve global sustainability, designing concrete measures for it, promoting international cooperation from the academic field, and contributing to such activities.

2. Universities Participated

This summit attracted about 140 participants from 27 universities (among which 14 universities are Japanese ones) in G8 countries and 7 universities in other countries (China, South Korea, India, Australia, South Africa, and Brazil) and United Nations University. (Attached hereto)

G8 countries	Canada	The University of British Columbia	President and Vice-Chancellor Stephen J. Toope
		University of Alberta	President and Vice-Chancellor Indira V. Samarasekera
	France	Ecole Polytechnique	President Xavier Michel
		Université Paris - Sorbonne (Paris IV)	President Georges Molinié
	Germany	LMU Munich	President Bernd Huber
		RWTH Aachen University	Rector Burkhard Rauhut
	Italy	Politecnico di Torino	Rector Francesco Profumo
		Università degli Studi di Firenze	Vice-Rector Guido Chelazzi
	Japan	Doshisha University	President Eiji Hatta
		Hitotsubashi University	President Takehiko Sugiyama
		Hokkaido University	President Hiroshi Saeki
		Keio University	President Yuichiro Anzai
		Kyoto University	President Kazuo Oike
		Kyushu University	President Tisato Kajiyama
		Nagoya University	President Shin-ichi Hirano

		Osaka University	President Kiyokazu Washida
		Ritsumeikan University	President Kiyofumi Kawaguchi
		The University of Tokyo	President Hiroshi Komiyama
		Tohoku University	President Akihisa Inoue
		Tokyo Institute of Technology	President Kenichi Iga
		Tokyo Metropolitan University	President Jun-ichi Nishizawa
		Waseda University	President Katsuhiko Shirai
	Russia	Far Eastern National University	President Vladimir Kurilov
	U.K.	Imperial College London	Pro Rector Mary Ritter
		The University of Cambridge	Prof. Peter Guthrie, Director, Center of Engineering for Sustainable Development
	U.S.A.	University of California, Los Angeles	Chancellor Gene D. Block
		Yale University	Mr. Donald Filer, Director, the Office of International Affairs
other countries	Australia	The Australian National University	Vice-Chancellor and President Ian Chubb
	Brazil	University of São Paulo	Prof. Carlos Clemente Cerri, Center of Nuclear Energy in Agriculture
	China	Peking University	Executive Vice-President and Provost Jianhua Lin
		Tsinghua University	Vice President Weihe Xie
	India	Indian Institute of Technology, Kanpur	Deputy Director Kripa Shanker

	Korea (Rep. of)	Seoul National University	President Jang-Moo Lee
	South Africa	University of Johannesburg	Vice-Chancellor and Principal Ihron L Rensburg
		United Nations University	Rector Konrad Osterwalder

3. Outline and results of the G8 University Summit

The main theme is "Global Sustainability and Roles of Universities." In addition, the Presidents discussed the two sub-themes: "New Scientific Knowledge and International Network to Support Global Sustainability" (Parallel Session A) and "Knowledge Innovation and Education for Global Sustainability" (Parallel Session B).
At the time of the opening of this summit, Prime Minister Yasuo Fukuda and Minister of Education, Culture, Sports, Science and Technology Kisaburo Tokai gave messages to the Presidents.
Then, during the plenary session, issues to discuss were raised. In the afternoon, the parallel sessions were held to discuss the above-mentioned sub-themes. (Attached hereto)
The results of the meetings were summarized as "Sapporo Sustainability Declaration" adopted in the plenary session on July 1. (Attached hereto)

Program for the G8 University Summit

1. Duration June 29 (Sun) to July 1 (Tues), 2008
2. Venue Keio Plaza Hotel Sapporo (Kita 5, Nishi 7, Chuo-ku, Sapporo, Hokkaido)
3. Theme Global Sustainability and the Role of Universities
4. Program

June 29 (Sun)	Details
19:00-20:30	**Welcome Party**

June 30 (Mon)	Details	
9:00-9:40	**Opening Session** Opening remarks Introduction of the participants Approval of the Chair and Vice-Chairs of the Plenary and Parallel Sessions	
9:40-12:00	**Plenary Session** Explanation of the purpose of the Plenary Session Explanation of the purpose of the Parallel Session <Raising Issues> (Presentations)	
13:00-17:30	**Parallel Session A**	**Parallel Session B**
	Parallel Session A 'New Scientific Knowledge and International Network to Support Global Sustainability' • <New Scientific knowledge on Global Sustainability> • <Network of Networks (NNs)> (presentations) (Comments)	**Parallel Session B** 'Knowledge Innovation towards Global Sustainability and Education' • <Knowledge Innovation as a Trigger for Social Reform> • <For Global Sustainability of the Next Generations - Education> (presentations) (Comments)

July 1 (Tues)	Details
9:00-11:30 (**Break: 10:35-11:05**)	**Plenary Session** • Presentation on the Summary of the Parallel Sessions • Adoption of the 'Sapporo Sustainability Declaration (SSD)' • Summary and closing remarks by the Chair
11:30-12:00	**Press Conference**

4. Date and Venue

Jun. 29 to Jul. 1, 2008
Keio Plaza Hotel Sapporo in Sapporo, Japan

5. Organization

President Hiroshi Komiyama of the University of Tokyo was approved as the Chair. President Hiroshi Saeki of Hokkaido University and President Yuichiro Anzai of Keio University were approved as the Vice-Chairs. President Saeki and President Anzai chaired Parallel Sessions A and B, respectively. In addition, President Indira Vasanti Samarasekera of University of Alberta, Canada, and Rector Francesco Profumo of Politecnico di Torino, Italy, served as the Vice-Chairs of the parallel sessions.

6. Follow-up

On July 4, 2008, President Komiyama of the University of Tokyo, President Saeki of Hokkaido University, President Anzai of Keio University, Rector Francesco Profumo of Politecnico di Torino, and President Xavier Michael of Ecole Polytechnique met Prime Minister Yasuo Fukuda at the Minister's office to hand over the Declaration and requested him to take leadership at G8 Summit to take actions based on the Declaration.

The Presidents aimed at promoting G8 leaders to recognize the outcome of the G8 University Summit through this meeting, and then reflecting it in the process for reaching a global consensus for achieving global sustainability through the discussions of global warming and other global issues at the G8 Toyako Summit, which was realized in the G8 Summit Document on Environment and Climate Change, in particular, in reference to the knowledge networks in the area of education for sustainable development.

As the follow-up of this summit, the presidents welcomed the proposal by the Conference of Italian University Rectors that the second G8 University Summit should be held in Italy in parallel with the G8 Summit in 2009,

Inquiries to:
Secretariat of The G8 University Summit Organizing Committee

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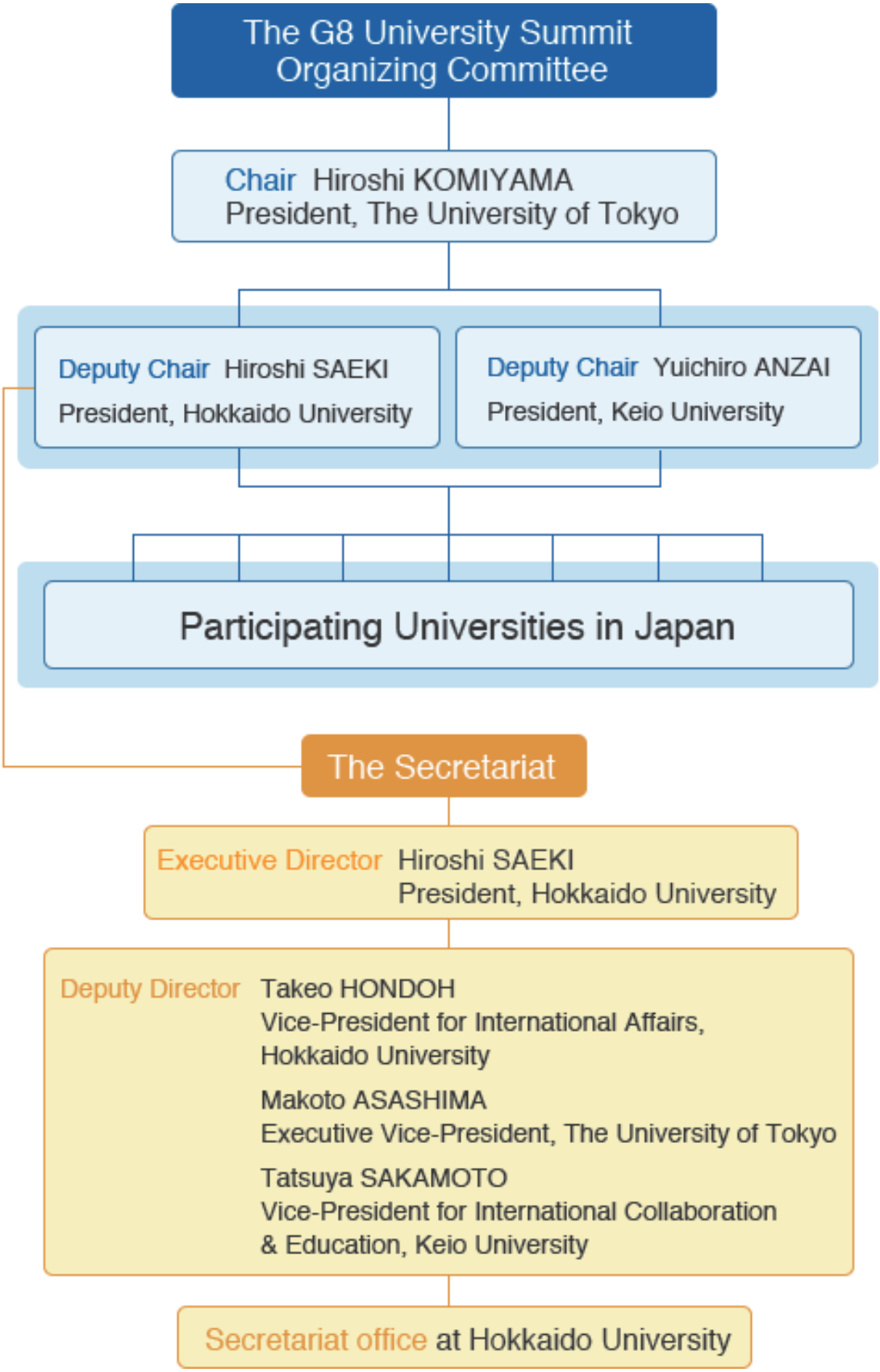
Encl. Participating universities of the G8 University Summit
Program for the G8 University Summit
Sapporo Sustainability Declaration (SSD)

Chart of the Organizing Committee



The members of Organizing Committee

President Hiroshi Saeki	Hokkaido University
President Akihisa Inoue	Tohoku University
President Hiroshi Komiyama	The University of Tokyo
President Kenichi Iga	Tokyo Institute of Technology
President Takehiko Sugiyama	Hitotsubashi University
President Shin-ichi Hirano	Nagoya University
President Kazuo Oike	Kyoto University
President Kiyokazu Washida	Osaka University
President Tisato Kajiyama	Kyushu University
President Junichi Nishizawa	Tokyo Metropolitan University
President Yuichiro Anzai	Keio University
President Katsuhiko Shirai	Waseda University
President Eiji Hatta	Doshisha University
President Kiyofumi Kawaguchi	Ritsumeikan University

Participating Universities

from Japan

Name of the universities	URL
Hokkaido University	http://www.hokudai.ac.jp/en/
Tohoku University	http://www.tohoku.ac.jp/english/
The University of Tokyo	http://www.u-tokyo.ac.jp/index_e.html
Tokyo Institute of Technology	http://www.titech.ac.jp/home.html
Hitotsubashi University	http://www.hit-u.ac.jp/index-e.html
Nagoya University	http://www.nagoya-u.ac.jp/en/
Kyoto University	http://www.kyoto-u.ac.jp/index-e.html
Osaka University	http://www.osaka-u.ac.jp/eng/
Kyushu University	http://www.kyushu-u.ac.jp/english/
Tokyo Metropolitan University	http://www.tmu.ac.jp/
Keio University	http://www.keio.ac.jp/index-en.html
Waseda University	http://www.waseda.jp/top/index-e.html
Doshisha University	http://www.doshisha.ac.jp/english/
Ritsumeikan University	http://www.ritsumei.ac.jp/eng/

Participating Universities

from abroad and International Organization

as of May 21, 2008

Country		Name of the universities	URL
G8 countries	Canada	The University of British Columbia	http://www.ubc.ca/
		University of Alberta	http://www.ualberta.ca/
	France	Ecole Polytechnique	http://www.polytechnique.edu/
		Université Paris - Sorbonne (Paris IV)	http://www.paris-sorbonne.fr/
	Germany	LMU Munich	http://www.en.uni-muenchen.de/
		RWTH Aachen University	http://www.rwth-aachen.de/
	Italy	Politecnico di Torino	http://www.polito.it/
		Università degli Studi di Firenze	http://www.unifi.it/
	Russia	Far Eastern National University	http://www.fenu.ru/
		Lomonosov Moscow State University	http://www.msu.ru/en/
	U.K.	Imperial College London	http://www3.imperial.ac.uk/
		The University of Cambridge	http://www.cam.ac.uk/
	U.S.A.	University of California, Los Angeles	http://www.ucla.edu/
		Yale University	http://www.yale.edu/

other countries	Australia	The Australian National University	http://www.anu.edu.au/
	Brazil	University of São Paulo	http://www4.usp.br/
	China	Peking University	http://www.pku.edu.cn/ehomepage.htm
		Tsinghua University	http://www.tsinghua.edu.cn/eng/
	India	Indian Institute of Technology, Kanpur	http://www.iitk.ac.in/
		University of Delhi	http://www.du.ac.in/
	Korea (Rep. of)	Seoul National University	http://www.useoul.edu/
	South Africa	University of Johannesburg	http://www.uj.ac.za/
		United Nations University	http://www.unu.edu/