GREEN CAMPUS MOVEMENT IN KOREA

MAGEEP 4th International Symposium on Energy and Environment

December 11, 2012
Mumbai, India

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President, KAGCI
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- Sustainable Crisis
- Talloires Declaration and UN Conferences for SD
- University Initiatives and Collaborations
- KAGCI and Green Campus Movement in Korea
WHAT IS SUSTAINABLE DEVELOPMENT?

- Definition of sustainable development
  - The development “that meets the needs of the present without compromising the ability of the future generations to meet their own needs” – United Nations World Commission on Environment and Development (WCED), *Our Common Future*, 1987

- Three pillars of sustainable development
  - Economic pillar: economic development
  - Social pillar: social development
  - Environmental pillar: protection of the environment

- All the systems in three pillars are vulnerable to the shocks from outside. If these systems cannot absorb the shocks, the systems will collapse. Diversity increases the resilience from shocks.
Sustainability Crisis:
‘Limits to Growth’ Model by the Club of Rome

Meadows, 1992, p.133
World Oil: Duncan & Youngquist, 1998
SUSTAINABILITY CRISIS:
OIL PEAK PROJECTION BY IEA

Source: Energy Information Administration
Note: U.S. volumes were added to the USGS foreign volumes to obtain world totals.
THE TALLOIRES DECLARATION

Association of University Leaders for Sustainable Future
10 Point Action Plan

- Increase Awareness of Environmentally Sustainable Development
- Create an Institutional Culture of Sustainability
- Educate for Environmentally Responsible Citizenship
- Foster Environmental Literacy for All
- Practice Institutional Ecology
- Involve All stakeholders
- Collaborate for Interdisciplinary Approaches
- Enhance Capacity of Primary and Secondary Schools
- Broaden Service and Outreach Nationally and Internationally
- Maintain the Movement

- 1994 Updated Version
- Originally signed by 20 University Presidents and Vice Chancellors in 1990 in Talloires, France
1992 UNCED: EARTH SUMMIT

- United Nations Conference on Environment and Development
  - Delegates from 172 countries
  - 108 Heads of State attended

- Official documents:
  - Rio Declaration on Environment and Development
  - Agenda 21

- Two important legally binding agreements were opened for signature:
  - United Nations Framework Convention on Climate Change
  - Convention on Biological Diversity
2002 WSSD: Rio+10

- World Summit on Sustainable Development
  - August 26 - September 4, 2002; Johannesburg, South Africa

- Official Documents
  - The Johannesburg Declaration on Sustainable Development – From Our Origins to the Future
  - World Summit on Sustainable Development – Plan of Implementation

- Overarching objectives of, and essential requirements for sustainable development
  - Poverty eradication
  - Changing unsustainable patterns of production and consumption
  - Protecting and managing the natural resource base of economic and social development
2012 UNCSD: Rio+20

- United Nations Conference on Sustainable Development
  - June 13~22
  - Rio de Janeiro

- Themes of the Conference
  - Green economy in the context of sustainable development and poverty eradication
  - Institutional framework for sustainable development

- Outcome Documents: The Future We Want
  - 283 paragraphs, 8 paragraphs are on education
HIGHER EDUCATION SUSTAINABILITY INITIATIVE

Commitment to Sustainable Practices of Higher Education Institutions on the Occasion of the United Nations Conference on Sustainable Development
20-22 June 2012, Rio de Janeiro

*As Chancellors, Presidents, Rectors, Deans and Leaders of Higher Education Institutions and related organizations, we acknowledge the responsibility that we bear in the international pursuit of sustainable development. On the occasion of the United Nations Conference on Sustainable Development, held in Rio de Janeiro from 20-22 June 2012, we agree to support the following actions:

- Teach sustainable development concepts, ensuring that they form a part of the core curriculum across all disciplines so that future higher education graduates develop skills necessary to enter sustainable development workforces and have an explicit understanding of how to achieve a society that values people, the planet and profits in a manner that respects the finite resource boundaries of the earth. Schools are also encouraged to provide sustainability training to professionals and practitioners;

- Encourage research on sustainable development issues, to improve scientific understanding through exchanges of scientific and technological knowledge, enhancing the development, adaptation, diffusion and transfer of knowledge, including new and innovative technologies.

- Green our campuses by: i) reducing the environmental footprint through energy, water and material resource efficiencies in our buildings and facilities; ii) adopting sustainable procurement practices in our supply chains and catering services; iii) providing sustainable mobility options for students and faculty; iv) adopting effective programmes for waste minimization, recycling and reuse, and v) encouraging more sustainable lifestyles.

- Support sustainability efforts in the communities in which we reside, working with local authorities and civil society to foster more liveable, resource-efficient communities that are socially inclusive and have small environmental footprints.

- Engage with and share results through international frameworks, such as the UN Decade of Education for Sustainable Development, led by UNESCO, the UN University system, the UN Academic Impact, the Global Compact, the UN-supported Principles for Responsible Management Education Initiative and the UN Environment Programme’s Environmental Education and Training. In order to exchange knowledge and experiences and to report regularly on progress and challenges.*

Date: 
Organization: 
Location: 
Name & Title of Signatory:

An initiative of 

[Logos of various organizations]
The Tertiary Education Collaboration for Sustainability

“Aiming Higher: Unlocking the Potential for Tertiary Education to Accelerate Sustainable Development”

Universities and colleges have much influence and reach, with strong efforts to integrate sustainable development into our curricula, research and operations. Sustainability requires the recognition and development of relevant competencies, values, skill sets, and approaches to problem-solving. Education has the platform to deliver the necessary tools for sustainability through professional and vocational training, inter-disciplinary instruction, and lifelong learning, thereby empowering students to become engaged workers and citizens in our sustainable future. The role of tertiary education, however, has been under-recognized and under-represented. We encourage delegates to reflect how universities and colleges provide relevant, critical and creative education to our future government, business, industry, education, organizational, and community leaders, thus helping foster sustainable development within healthy green economies, ecosystems, and communities. We ask delegates to support the strongest possible actions in supporting higher education as a driver of sustainable development.

As critical homes for teaching, learning, training, research and new ideas, tertiary education serves as a source for:

- Innovation and industry partnerships
- Strong relationships and facilitated engagement with communities
- Consciousness-raising and cultural paradigm shifts
- Cross-fertilization of knowledge and cultural diversity through international student exchange programs
- Sustainable best practices, as modeled in our curricula and operations

From sustainability outcomes, courses, programs, and degrees to Living Labs and administrative support for Climate Action plans, universities and colleges are perfectly situated to help advance sustainability around the world, at the global and local levels. We contend that universal and equal access to quality education beyond the primary level is essential for sustainability, poverty eradication, gender equality, human development, and iterare global citizens.

We believe tertiary education should lead efforts towards sustainable development, as established in the People’s Sustainability Treaty on Higher Education towards Sustainable Development and the Higher Education Sustainability Initiative.

The treaty and initiative have received international endorsements, but they require significantly more recognition, funding, support, teacher training, new curriculum development and collaboration with governments, industry, organizations, and communities. Join us in supporting tertiary education institutions to reach their full potential in paving the pathways needed for nurturing our students in sustainable knowledge, practice, leadership, and development and take this message with you into your discussions about the future, in order to reach the goals and objectives stated through Rio+20 and beyond.

Organizing Partners: Association for the Advancement of Sustainability in Higher Education (USA, Canada), Australasian Campuses Towards Sustainability, Environmental Association for Universities and Colleges (UK), Copernicus Alliance (Europe), Fondation – Fondation Européenne pour des Territoires Durable (France), Global University Network for Innovation (GUNi, international), Korean Association for Green Campus Initiative (KAGCI), Promotion of Sustainability in Postgraduate Education and Research network (ProsPHER-Net Asia), China Green University Network, United Nations Environment Programme – Environmental Education and Training Unit (international), Global Responsibility Leadership Initiative (GRLI), Conference des Grandes Ecoles (France), and Conference des Presidents d’Universite (France)
Role of Higher Education Institution for the Advancement of Sustainability

- Universities are part of an institutional framework for SD and they should lay theoretical as well as practical foundation for the establishment of sustainable society through education, research, and community outreach.

- Green campus movement of higher education is to transform the universities and colleges into a focal point of green practices and sustainable development by considering sustainability as a core value of education, research, management, and community outreach, in collaboration with the government and civil society.
The Green Campus: How to teach new respect for the environment? The 3 R’s: reduce your carbon footprint, reuse and recycle.

Going Green Registers with Colleges

Green Chemistry Joins College Curriculum

THE QUAD’S NOT THE ONLY GREEN SPOT ON CAMPUS

The Campus Green, Greener, Greenest

Purdue Puts Energy into Sustainability
“We [colleges and universities] may comprise only 3% of the carbon footprint, but we represent 100% of the student footprint.”

Michael Crow,
President Arizona State University
GREEN is the New Crimson

Sustainability and Harvard University Initiative
Campus facilities leaders commissioned a campus water resource conservation study in 2002. Today, residence halls and other campus buildings conserve more than two million gallons of water annually, saving $15,000 each year.
Taking Your Campus Sustainability Program to a Global Stage
Global Perspective, Global Reach

We live in an interconnected society, demanding holistic solutions for complex issues such as climate change and global economic imbalance. The iSCN brings together the best minds in higher education to train future leaders and serve as models of sustainability through operational excellence.

In 2009, the iSCN partnered with GULF, a World Economic Forum initiative led by the heads of the world’s top universities, to develop the iSCN-GULF Sustainable Campus Charter. The Charter establishes three guiding principles for campus sustainability, provides a framework to report goals, initiatives, and performance, and must be endorsed by senior leadership to ensure support.

Our membership represents:
- More than 30 top-tier colleges and universities
- 13 countries across the Americas, Europe, and Asia
- 7 out of 10 institutions in the International Alliance of Research Universities (IARU)
- Nearly all of the GULF institutions

We continually promote our members through the iSCN website (visited by more than 1200 people per month), and in reports and news disseminated to over 200 institutions and corporations worldwide.

A Platform for Transparency and Knowledge Exchange

Charter Reporting provides a flexible format to disclose sustainability goals, initiatives, and performance in alignment with standards such as the Global Reporting Initiative and AASHE’s Sustainability Tracking and Rating System. Members produce annual Charter reports which are given visibility through the iSCN website and GULF discussions at the World Economic Forum, and are analyzed and shared as best practices at iSCN meetings.

Sustainable Campus Excellence Awards elevate the status of campus projects for public recognition of the most innovative and effective strategies. A panel of expert judges selects the best projects to be awarded at the annual iSCN meeting.

Annual iSCN Events foster best practice exchange, networking, and professional development in an intimate setting. Ample time is set aside for working sessions among the 90-100 participants, including a diverse mix of disciplinary backgrounds and levels of expertise.

Working Groups allow faculty, staff, and students across the world to explore critical issues and develop resources related to the three Charter principles.

Principle One
- Buildings and their sustainability impacts
- Principle Two
- Campus-wide planning and target setting
- Principle Three
- Integration of research, teaching, facilities, and outreach
The International Sustainable Campus Network (ISCN) provides a global forum to support leading colleges, universities, and corporate campuses in the exchange of information, ideas, and best practices for achieving sustainable campus operations and integrating sustainability in research and teaching.

The ISCN Secretariat is supported by:

ISCN Secretariat
c/o Sustainserv, Inc.
311 Summer Street, Suite 310
Boston, MA 02210, USA
Phone +1 617 339 5901
www.isc-network.org

www.ethz.ch
www.epfl.ch
GLOBAL UNIVERSITY LEADERS FORUM (GULF)

ISCN/GULF SUSTAINABLE CAMPUS CHARTER

The signatories of the ISCN/GULF Sustainable Campus Charter acknowledge that organizations of research and higher education have a unique role to play in developing the technologies, strategies, citizens, and leaders required for a more sustainable future. Signature of the present charter represents an organization’s public commitment to aligning its operations, research, and teaching with the goal of sustainability. The signatories commit to:

- implement the three ISCN/GULF sustainable campus principles described below,
- set concrete and measurable goals for each of the three principles, and strive to achieve them,
- and report regularly and publicly on their organizations’ performance in this regard.

**Principle 1:** To demonstrate respect for nature and society, sustainability considerations should be an integral part of planning, construction, renovation, and operation of buildings on campus.

**Principle 2:** To ensure long-term sustainable campus development, campus-wide master planning and target-setting should include environmental and social goals.

**Principle 3:** To align the organization’s core mission with sustainable development, facilities, research, and education should be linked to create a “living laboratory” for sustainability.
Five government ministries and the university/college presidents’ Association exchanged MOU to proliferate green campus movement in Korea (2011.6)

KAGCI CHAIRMAN, EDUCATION, SCIENCE AND TECHNOLOGY MINISTER, ENVIRONMENT MINISTER, YONSEI UNIVERSITY PRESIDENT, SIGNED MOU TO REDUCE CO2 AND TO PROMOTE SUSTAINABLE DEVELOPMENT IN THE UNIVERSITY CAMPUSES (MAY 2009)
KAGCI Research Reports on Green Campus

- **Green Campus Implementation Plan for Universities and Colleges**
  (2009, Ministry of Education, Science and Technology)

- **Green Campus Dissemination Strategies**
  (2009, Ministry of Education, Science and Technology)

- **Cooperation between Universities and Local Communities for Green Practices**
  (2010, Ministry of Education, Science and Technology)

- **Green Campus Cases of Advanced Countries**
  (2010, Ministry of Environment)

- **Green Growth Education in Higher Education**
  (2010, Ministry of Education, Science and Technology)
KAGCI GREEN LEADERS’ SUMMER CAMP
KAGCI’s Other Activities
Sangji University- GENS 21

Building ECO-Campus official evaluation (every 5 years)

Alternative energy

ECO-Curriculum

Environmental-friendly organic restaurant

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<tr>
<th>Section</th>
<th>Semester</th>
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Solar photovoltaic power generation

Local food
2008 Sustainable SNU Declaration in the Knowledge-based society

- Research & education
- Co-work with community
- Environment management of Campus
- Environmentally-friendly Campus

Management for Sustainable Development

- Acquisition of ISO 14001 certification.

Global Asian Center of Sustainability

June 10, 2009.
3–3. YONSEI UNIV.–ECO CAMPUS

**Vision**

Build the Capacity for a Sustainable Future

- Cultivate decision makers considering on sustainability
- Educate advanced researchers with an international competitive capability
- Fulfill social and global responsibilities through education
- Green campus construction & management

**Strategy**

Innovative System: Multidisciplinary & Holistic Approach

Industry-Academy-Government Cooperation

Asian Hub: Songdo Global Campus

- Solar photovoltaic Power Generation
- Hydrogen station
COOPERATION AMONG UNIVERSITIES, GOVERNMENTS AND NGOs TO ENHANCE GREEN CAMPUS MOVEMENT
# KAGCI Strategies and Action Plans for Green Campus

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<td>1. Green Management</td>
<td>Sustainable Management System</td>
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<td>GHG Reduction Plan</td>
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<td>2. Sustainability Education</td>
<td>Sustainability Curriculum</td>
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<td>Train Green Leaders</td>
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<td>3. Green Practices</td>
<td>On Campus Sustainability Practice</td>
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<td>Support Community Sustainability Efforts</td>
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<td>4. Sustainability Appraisal</td>
<td>Response to GHG Target Management Scheme</td>
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<td>Green Campus Appraisal</td>
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<td>5. Capacity Building</td>
<td>Promote Public-Private Partnership</td>
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<td>Global Cooperative Network</td>
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KAGCI Institution

Members

60 Universities and Colleges throughout the country
Thank You!

www.kagci.org