



I. Introduction

- 23 universities were included among 190 excessive energy consumption organizations in Korea. Energy consumption management is required in Korean universities.
- ESD for university students are very important for the sustainable future of every country since they will be important leaders of the society and decision makers for policy.
- However, energy consumption management policy in Korean universities and the ESD for university students in Korea, including Yonsei University are under developing.





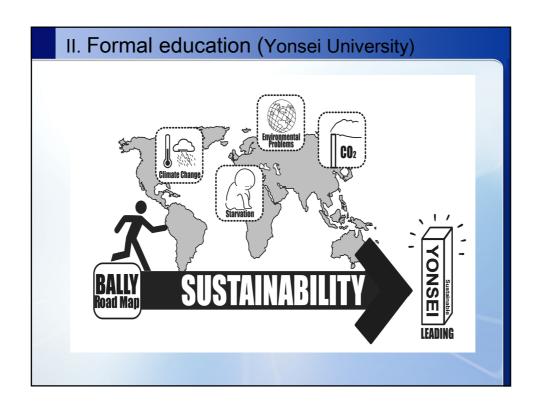
I. Introduction (continued)

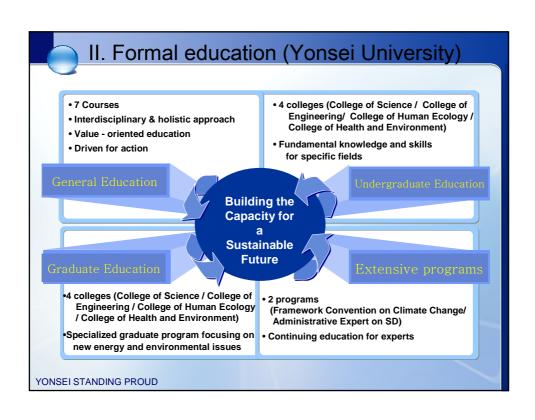


It requires not only the resolution of energy and environmental problems but also changes in social, national systems as well as individual life style.



- I. Introduction (continued)
 - Thus, it is necessary to make a direction of environmental education for sustainable development and to establish interdisciplinary education curriculum.
 - Additionally, Korean universities, including Yonsei University, realized the importance of environment and started to make plans for Eco-campus (Green Campus).







II. Formal education (Yonsei University)

(1) Curriculums

- 3 credits and 1 credit

Name	Dept.
Interesting story with Environment	Chemical Engineering
Oxygen sources for city	Electronics Engineering
Life and Environment	Biology
Environment and Atmosphere	Atmospheric Science
Environment and Water	Preventive medicine
Human and Ecology	Biology
Environmental Conservation	Earth System Science
Living in Harmony with Environment	All Dept.



- * Summary of Problems
- The Goals of course are out of date.
- Environmental Pollution oriented courses
- Natural Science and technology approached courses
- Lack of suitable educational materials such as text book and teaching materials



III. Other types of Education

- (1) Eco Forum
- 1) History
- Initiated in 1991 as "Yonsei Environmental Research Group"
- Established as "Yonsei Eco Forum" in Oct. 2001
- In 2002, established "Sustainable Development Research Center"



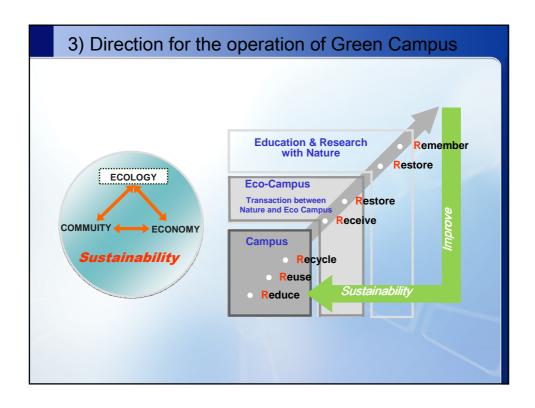
2) Organization

- A research group of over 100 professors from liberal arts, social science, natural science, engineering, law, and medical schools
- 3) Main Activities
 - Hold 6~8 Monthly Workshops and International Seminars each year
 - Developed Interdisciplinary Course in Fall, 2003
 - Researched 'A Study on Creating Eco Campus at Yonsei University' in 2003



- (2) Establishment of Green Campus Initiative
- 1) Why Korean universities are behind to solve environmental problems?
 - Lack of responsibilities from students, professors, and staffs
 - Lack of capacity to make plans from administration department of universities
 - Lack of budget
 - Low pressure from outside of universities compared with business sector and home
 - Lack of education and education programs





4) Direction for the improvement of curriculum

- To make the whole campus as the education site
- To make the general education curriculum for environmental literacy
- To put environmental contents to related courses
- To make interdisciplinary courses for environment, society and economics
- To get a strong support from university administration

5) The way for the participation of students

- To change the way to support student activity
 ex) student ambassador for environmental conservation
 development of internship program
- Development of various incentive programs
 ex) Scholarship for environmental conservation
- Sustainable efforts of university for education and advertisement
 - ex) Competition for the reduction of energy consumption





IV. Efforts for improvement of EE and ESD in Yonsei University

(1) To make courses for ESD

- All environmental problems are very complicated and cannot be solved by end-of-pipe controls (technology, pollution control devices).
- To solve environmental problems we need the interdisciplinary and holistic approach.
- Thus, it is necessary to develop courses ESD such as 'Living in Harmony with Environment' developed by Yonsei University.



1) Living in Harmony with Environment

- Since 2002, professors of Yonsei University from many departments (Economics, Law, Philosophy, Preventive Medicine, Science education) had started to carry out interdisciplinary research on the environmental education curriculum.
- The result of this research has been transformed into an interdisciplinary course of education for sustainable development, 'Living in Harmony with Environment'.
- The course was opened as a team teaching course in Spring of 2004.



- 1) Living in Harmony with Environment (continued)
- The contents of this course are as follows:
- A. Environmental Crisis and Sustainable development
- B. Earth Environment and Ecosystem
- C. Environmental Pollution and Health
- D. Environmental Problems and Society
- E. A New Paradigm-Sustainable Development



- (2) To develop the EE Textbooks for ESD
- Korean Ministry of Environment and the research team of Yonsei University (PI: Professor Tae Yoon Park) are working together to develop the EE Textbooks for university students in 2006.
- The main goals of this book are the understanding of Environmentally Sound and Sustainable Development (ESSD).



1) Direction of the Textbook

- Interdisciplinary and holistic approach for environmental problems.
- To understand and optimize social, economic, and environmental conditions simultaneously for the establishment of sustainable society.
- To help university students' critical thinking and decision making for environmental issues.



2) Contents of the Textbook

- A. Understanding Earth Environmental system
- B. Environmental Philosophy and Ethics
- C. Concept of Sustainable Development and International Conventions for Environment
- D. Ecosystem
 - The change of human life and economic system for the sustainability of ecosystem



- E. The Cycle of Atmosphere and Water in Earth
- F. Energy and Recycle of Resources
 - Energy use and management
 - Alternative Energy.
 - Waste management, 3Rs, and etc
- G. Environmental Health
- H. Environmental Management for Sustainable Economics (For Science and Engineering Major students)



- I. Sustainable Land Management (For Business, Economics, and other Social Science major students)
- J. Environmental Administration, Policy, and Law
- K. Toward to Sustainable Development

