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Environmental Leadership Initiatives for Asian Sustainability

Vision for Environmental Leadership Initiatives for Asian Sustainability

Background

The United Nations Decade of Education for Sustainable Development (UNDES) was proposed by then Japanese prime minister, Junichiro Koizumi, at the World Summit on Sustainable Development, Johannesburg 2002. In the same year a resolution designating the years 2005 to 2014 as the UNDES was unanimously adopted by the United Nations General Assembly. Japan developed a UNDES National Plan of Action in 2006. The plan addresses the importance of implementing sustainable development programs at higher education institutions as a first step. In June 2007 Strategy for an Environmental Nation in the 21st Century and Innovation 25 was approved by the Japanese Cabinet. Both initiatives address the need for training future

environmental leaders with the ability to meet environmental challenges both in Japan and overseas. In the same year leaders from countries across Asia, meeting at the East Asia Summit (EAS), high level meetings between China and Japan, and other meetings, agreed to work together toward developing environmental leadership in Asia.

The Ministry of the Environment set up a panel of experts from universities, companies, and nonprofit organizations to review the Vision for Environmental Leadership Initiatives for Asian Sustainability in Higher Education (Environmental Leadership Vision) and that Vision statement was adopted in March 2008.

Who are Asia's Future Environmental Leaders?

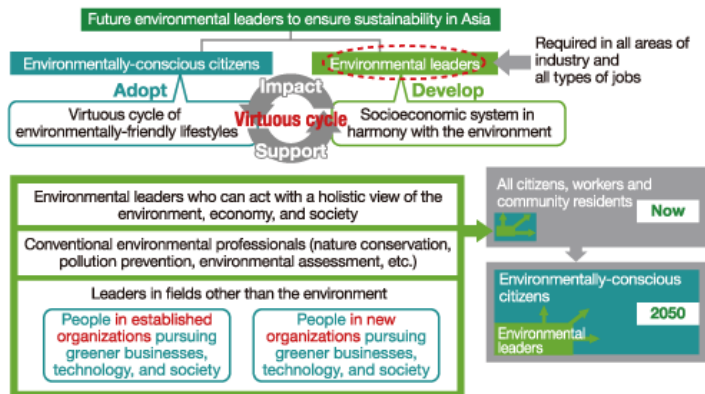
Sustainable development initiatives in Asia

Asian countries are experiencing an escalating demand for natural resources, food and water on top of soaring pollution and health problems as well as increasing greenhouse gas emissions due to rapid economic expansion and

population growth.

There is an urgent need in these countries to train future environmental leaders who will work to ensure sustainable development.

Environmental Leadership Program Targets



Two types of people are needed to achieve sustainable development:

1. Environmentally-conscious citizens: people whose lifestyles have a minimal environmental impact

Conventional environmental education has focused on raising people's environmental awareness.

2. Environmental leaders: leaders who have the ability to make the socioeconomic system more in harmony with the environment through environmentally-friendly products, services, businesses, technologies, and policies

A vision for training such environmental leaders has been proposed by the panel.

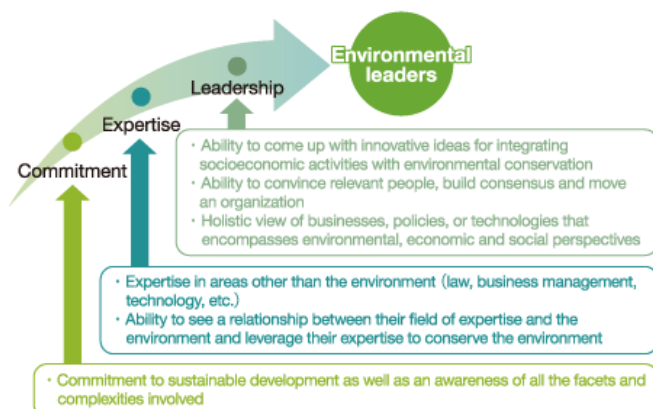
Environmental leaders as defined in the Vision statement

Environmental leaders are those who

- look at environmental problems in light of their own experience and moral values,
- are committed to leveraging their area of expertise to realize sustainable development in their professional and private lives, and
- exercise leadership in fulfilling their social responsibilities.

Three requirements for leadership training

Interviews conducted with more than 200 environmental professionals at universities, companies and NGOs asking for their opinions about environmental leadership revealed that there are mainly three basic building blocks that go into making environmental leaders. These building blocks include commitment, expertise, and leadership.



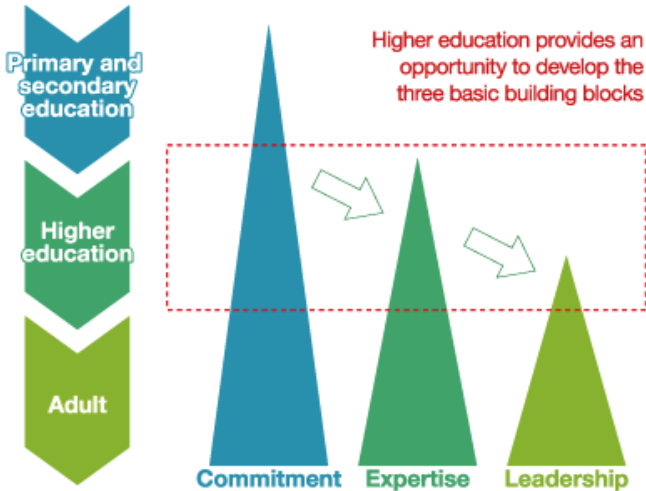
Skills required for Asian environmental leaders for the long-term and short-term

	In advanced Asian countries	In developing Asian countries
Short-term	<ul style="list-style-type: none"> • Ability to take action with a sound environmental ethic for complying with environmental regulations • Technological skills for analyzing and monitoring currently occurring environmental problems and their impact • Ability to develop green technologies that will minimize environmental burden 	<ul style="list-style-type: none"> • Ability to acquire and maintain techniques that are suitable and feasible for each country such as environmental planning • Ability to accurately identify priorities and take action based on the significance and urgency of environmental impact • Ability to work on environmental conservation while meeting social needs such as poverty issues
	<ul style="list-style-type: none"> • Ability to assess and make decisions for short-term and long-term needs from a comprehensive perspective • Leadership or educational ability to disseminate environmental knowledge, information and technologies within a country 	
Long-term	<ul style="list-style-type: none"> • Ability to analyze the social structure of a developing country based on an understanding of its historical, economical, and cultural background and social system related to environmental conservation as well as knowledge about environmental regulations • Ability to design and develop effective environmental measures and various incentive programs based on particularities and specific situations in a developing country • Ability to seek and implement measures to integrate economic development and environmental conservation while avoiding the path taken by advanced countries that has led to economic growth without due attention to environmental conservation 	
	<ul style="list-style-type: none"> • Ability to take action with a sound environmental ethic for complying with environmental regulations enforced by the central and local governments • Technological and developmental capabilities to make production and manufacturing processes greener • Ability to take initiative to implement new systems, products and services that reduce environmental impact depending on the level of development 	
	<ul style="list-style-type: none"> • Ability to leverage knowledge and technologies necessary for sustainable development in Asia and pass these down to future generations • Ability to deal with various problems facing the community from a comprehensive perspective and determine priorities • Ability to choose environmentally-friendly systems, products and services 	

Path to Effective Environmental Leadership Training

Ideal Environmental Leadership Training

Ideal phase: importance of higher educational institutions

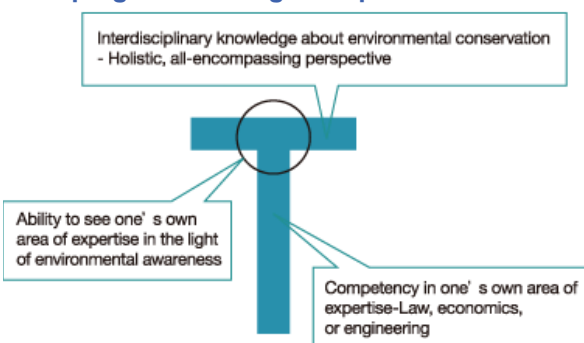


Lifelong learning is necessary for acquiring the three building blocks needed to make environmental leaders

1. It is vital to cultivate an environmental consciousness through early childhood experiences with the natural environment so that an appreciation for life and nature will take deep root
2. Higher education provides students with an opportunity to acquire a broad range of general knowledge and advanced expertise at a crossroad in their professional and personal development

Higher education can play a central role in training future environmental leaders since it integrates education with opportunities to develop commitment, expertise and leadership skills, the three principal building blocks that go into making environmental leaders. However a recent questionnaire survey revealed that while 60% of universities incorporate environmental programs in their general education curriculums many of them offer these programs as electives instead of making them mandatory subjects. According to an interview survey, the bulk of environmental education is provided through lecture-style courses, indicating that programs that systematically shape the three principal building blocks are not widely implemented.

Ideal program: building T-shaped skills



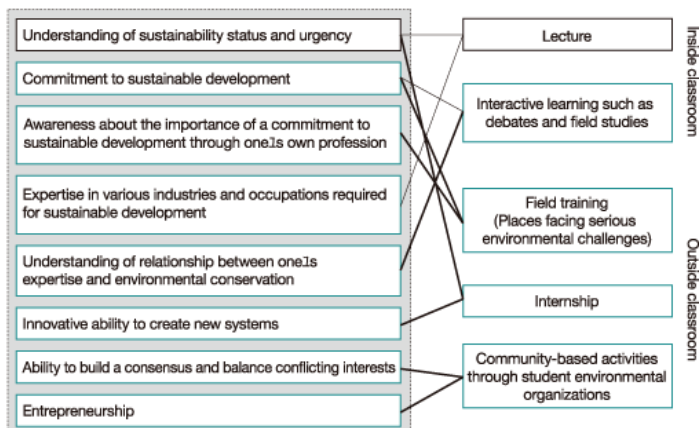
T-shaped skills provide the key to successful environmental leadership.

Environmental leaders should not only have deep understanding of their specialized field, such as law, economics or engineering but also a broad knowledge of all areas relevant to the environment and sustainability. These T-shaped skills coupled with a holistic and interdisciplinary perspective will enable them to look through the lens of their particular area of expertise in light of environmental conservation and sustainable development.

Challenges

1. Insufficient educational opportunities for developing a holistic perspective on the environment and sustainability
2. Lack of educational opportunities that integrate academic major programs with issues concerning the environment and sustainability

Ideal methods/places: interactive, problem-solving, and Field activities



The conventional educational method of passive learning is ill-suited to training future environmental leaders. Environmental leadership training should include interactive programs incorporating debates and field studies. It should also include field training, internships, and other real-world activities through student environmental organizations to develop professional skills as well as planning and consensus-building abilities. Implementation of these educational approaches, unfortunately, has been limited. There are three major obstacles blocking the way to this approach.

1. Lack of human resources capable of providing practical and interactive training
2. Insufficient infrastructure for including students in internship or field training programs
3. Burden universities face in seeking partnerships with external organizations

Outlook for the Future

Since 2008 the Ministry of the Environment has been working jointly with relevant government ministries and agencies to implement environmental leadership training programs through government-industry-academia

partnerships under the Environmental Leadership Initiatives for Asian Sustainability (ELIAS) project with a focus on three major areas.

1. Development for Higher Education Programs

2. Government-Industry-Academia Partnerships

3. ProAPER.Net

Environmental Leadership Initiatives for Asian Sustainability (ELIAS) 1 Development and Dissemination of Industry-Specific Environmental Leadership Programs through Government-Industry-Academia Partnerships

Developing and Disseminating Model Higher Education Programs

Commitment — through general education programs

General education programs provide students with a comprehensive educational experience and foster an awareness of their individual social responsibilities. These programs help students discover a lasting interest in particular fields of study and prepare them for advanced study in their

Proposed Programs

1. Required or elective programs designed for all majors that will inspire students to get involved in environmental protection
2. Learning opportunities that foster a basic knowledge about environmental issues as well as basic understanding of environmental management
3. General education programs designed to help arts students gain a broader understanding of the science behind environmental problems and the scientific approaches to solving those problems

Examples

Lectures and workshops that enhance basic understanding about environmental problems (cause and effect relationships, etc.), environmental fieldwork, role-playing activities for learning about specific

academic major. It is critical that these programs, designed to develop adequate environmental human resources, instill a strong sense of environmental awareness in students and drive them toward achieving a sustainable future.

Expertise — through major programs

Undergraduate major programs provide students with specialized knowledge and skills they can apply to the real world. While enrolled in these programs, students make decisions on their future careers or choose to continue studying for a graduate degree. A comprehensive, interdisciplinary

Proposed Programs

1. Early undergraduate programs incorporating environmental education
2. Educational opportunities that will enable students to gain an environmental perspective on putting what they have learned into practice outside the classroom
3. Training that enhances the students' ability to detect problems, ability to plan ahead and take action, as well as think outside the box

Examples

Curriculum for engineering or science majors that equips students with a knowledge of environmental assessment so they will be able to evaluate the environmental performance of the technologies that shape our lives; learning opportunities for law or economics majors that foster an ability to act not only with a short-term perspective on human welfare but also with a long-term perspective on the environmental externalities associated with the finite nature of natural resources and economic activities; role-playing

environmental problems, discussions and debates on the solutions and outlook for environmental problems, as well as other programs that will motivate students to take environmental action.

educational approach should be adopted so that students have the opportunity to develop an expertise in their chosen major areas of study, such as law, economics, or engineering, in addition to a holistic view of environmental conservation.

Leadership — through graduate programs

Graduate programs provide students with opportunities to develop the skills they will need to chart a course for sustainable development as future corporate managers or policymakers. Students pursuing an

Proposed Programs

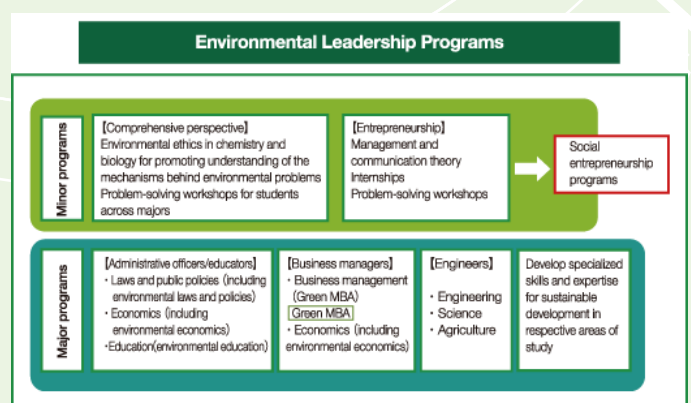
1. Programs that develop T-shaped skills by promoting a deeper understanding of environmental conservation and sustainability from a bird's eye perspective
2. Programs that develop the communicative and social skills needed for consensus building as well as entrepreneurship and leadership skills necessary to meet new challenges

Examples

- Minor programs and practicals open to all students, regardless of their major, designed to develop entrepreneurship, business innovation, and management abilities.
- Minor programs that enable law majors to acquire the specialized knowledge and skills needed to meet the challenges of environmental conservation and sustainable development, such as in-depth understanding of environmental laws as well as the ability to take a comprehensive and panoramic view of major global trends.
- Problem-solving field work and internship programs that provide expertise, leadership skills and the motivation to take initiative in solving environmental problems.

activities and workshops that foster a holistic view of the environment, society and economy; corporate internships that provide students with opportunities to experience product/service development; joint fieldwork programs with relevant nonprofit or government organizations to develop problem-solving abilities; opportunities to interact with students from other Asian countries.

advanced degree can be given the opportunity to look at their chosen area of study through a lens of sustainable development that will continue to focus their attention on the environment in their lives beyond the classroom walls.



2008 Project to Develop Higher Education Environmental Leadership Training Programs

The Ministry of the Environment has been actively working with Japanese universities, companies, government and nonprofit organizations, as well as institutions of higher education throughout Asia to develop human resources with the exact environmental skills specified in the Environmental Leadership Vision for Asian Sustainability. Between February 28, 2008 and April 11, 2008 the Ministry publicly solicited projects to develop higher education environmental leadership training

programs. Entries were received from a total of 35 universities. Six of these entries were selected as projects for the year 2008. The Ministry of the Environment will work with relevant government ministries and agencies to implement these projects that promote ELIAS (Environmental Leadership Initiatives for Asian Sustainability) with an eye to developing adequate human resources for sustainable development in Asia.

Ibaraki University



Program Title:

Graduate School Program to Educate Environmental Leadership for Asian Sustainability

Cultivation of Future Local Leaders with a Broad Perspective and a Power of Execution.

Program Outline:

As part of the "Graduate Education Program on Sustainability Studies", a cross sectional sub-major program that would enable experts to bring out their ability in the local and international arena will be designed and implemented.

Features:

This program provides cross sectional sub-major program to acquire a broad perspective and systematizes various major and sub-major curriculum, expected to spread throughout Japanese and oversea universities.

Tokyo University



Program Title:

Japan/Asia SATOYAMA Education Initiative

Program Outline:

This project aims to cultivate international environmental leaders who can communicate the "Satoyama Model", a social model of circulation and cohabitation by understanding the utilization and management system of Japanese traditional local resources (Satoyama) and finding ways to restructure and reproduce common nature-views of Asia through on-site practices and international exchanges.

Features:

This project has a scheme to acquire a broad perspective and build advanced expertise in order to utilize and manage "SATOYAMA". In partnering with the United Nations University and universities in Asia, there is a potential to communicate SATOYAMA Model to Asia, and to build coalition with other Japanese Universities that work on Satoyama conservation.

Keio University Shonan Fujisawa Campus



Program Title:

Low Carbon Design Course(tentative name)

Program Outline:

To cultivate students who can contribute to establish low carbon society, the Shonan Fujisawa Campus with related parties will set up a new course to cultivate professionals with practical skills in CDM development and market expansion of carbon credit.

Features:

This program has a clear focus on Environmental Leadership and will provide practical education in collaboration with industry, academia, government, and NGOs.

In addition, it is expected that this program would offer a dual degree with universities in China, and Korea in the future.

Shinshu University



Program Title:

Green MOT(Management of Technology) Education Program Implementation

Program Outline:

This program aims to educate practical environmental leadership by developing "original" Green MOT Education Program. It targets executives and engineers of manufacturing and regional companies.

Features:

This project has a clear focus on greener management. It has the potential to become the Japanese version of green MBA/MOT model which may expand to other Japanese and oversea universities. Concrete collaboration with local companies and other related parties are to be expected in the future,

Chubu University



Program Title:

Leadership for Environment and Development: Participatory Curriculum Development Network Between the NGO and University.

Program Outline:

In this program, NGOs will handle field research and contacting the local community. And the university will provide scientific knowledge. Through this role sharing, this program aims to build and carry out environment and development related curriculum modules.

Features:

This program would be a model of systemic curriculum development on environmental leadership in various areas, and consolidates fieldworks carried out in collaboration with the NGO and online course provided by the IT infrastructure. Coalition with Japanese and Asian NGOs is also expected.

Kochi University



Program Title:

Development of Cooperative Social Education Program for Environmental Leadership

Program Outline:

This program focuses on cultivating environmental personnel who can succeed in NGOs and social entrepreneur fields through strengthening discipline required as an environmental leader and in the society. In addition, through developing a systemic program which emphasizes cooperation with the society, this project aspires to cultivating personnel with strong motivation and ability to take action toward a sustainable society.

Features:

This program has a clear vision of cultivating an environmental leader who can connect local environmental conservation and social entrepreneurship. This program has the potential to become a model of practical education method such as participatory learning method and long-term internship.infrastructure. Coalition with Japanese and Asian NGOs is also expected.

Environmental Leadership Initiatives for Asian Sustainability (ELIAS) 2

Launching a Government-Industry-Academia Consortium for Environmental Leadership Training

In order to implement practical environmental leadership programs and promote employment of people with environmental skills, it is essential to promote partnerships among universities, as well as partnerships between universities and the companies, governments, or nongovernmental/nonprofit organizations that will employ them. In 2008 the Ministry of the Environment, working jointly with relevant government ministries and agencies, started providing support for establishing a government-industry-academia consortium for environmental leadership training.

Universities, private companies, nongovernmental, government and international organizations are encouraged to participate in the consortium. The consortium's major activities will include supporting the development of environmental leadership programs for college students in Asia, serving as an information center, as well as facilitating industry-academia partnerships in environmental businesses and joint research projects.

The consortium will also serve as a framework for promoting government-industry-academia partnerships as well as a foundation for supporting collaborative efforts that are mutually beneficial to people in various fields.

Consortium Objectives

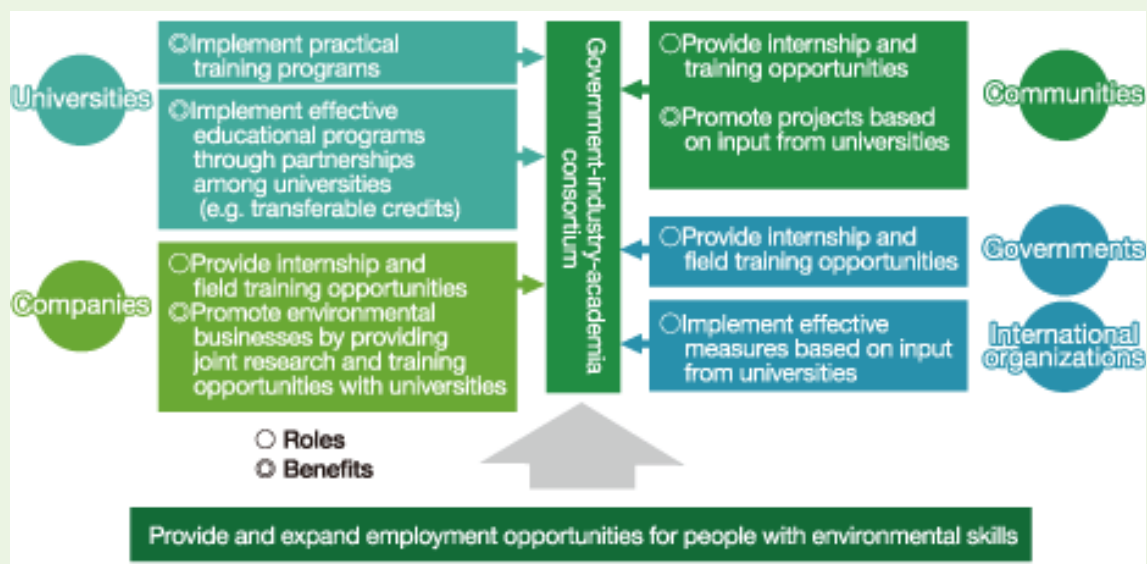
- Promote and support the development and implementation of high-quality programs as well as serve as an employment matchmaker between the educational institutions that provide human resources and the organizations that employ them in order to facilitate practical environmental leadership training.
- Function as Japan's gateway to other Asian countries, networking universities throughout Asia.
- Promote industry-academia collaboration in joint research and development.



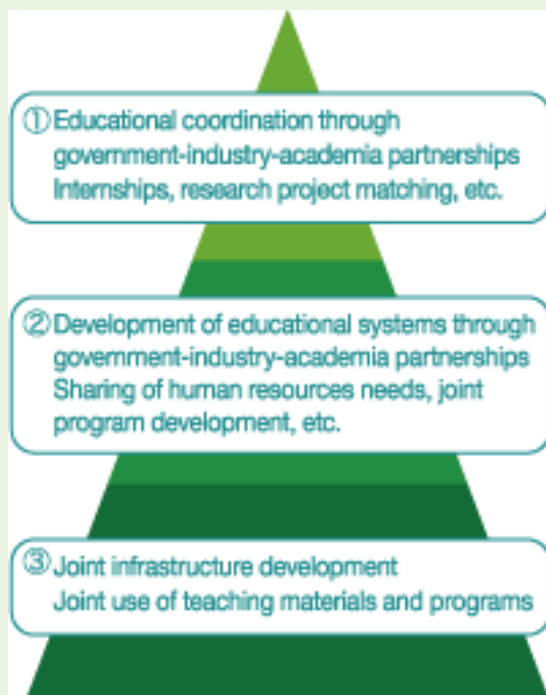
Consortium Advantages

Activities of the industry-academia consortium for environmental leadership training will promote:

- Development of human resources equipped with the environmental skills needed by society,
- Development of environmental human resources through practical training,
- Matching of interns and field work participants with host sites,
- Use of environmental human resources,
- Competitive environmental businesses, and
- Integration of corporate activities and environmental conservation.



Consortium Roles



1. Coordinate activities in response to individual needs of universities, companies, nonprofit organizations and other organizations and provide opportunities for interaction among universities, or between universities and private sector organizations.

Examples

- Hiring and referral of external lecturers to universities
- Fieldwork programs using relevant organizations' sites
- Programs that incorporate relevant organizations' needs

2. Build a common system for disseminating internship, fieldwork and other practical training programs

Examples

- Providing opportunities for interaction among universities or between universities and private sector organizations
- Building/promoting a common system for disseminating internship, fieldwork and other practical training programs

3. Develop common infrastructure for environmental leadership training open to universities participating in the consortium

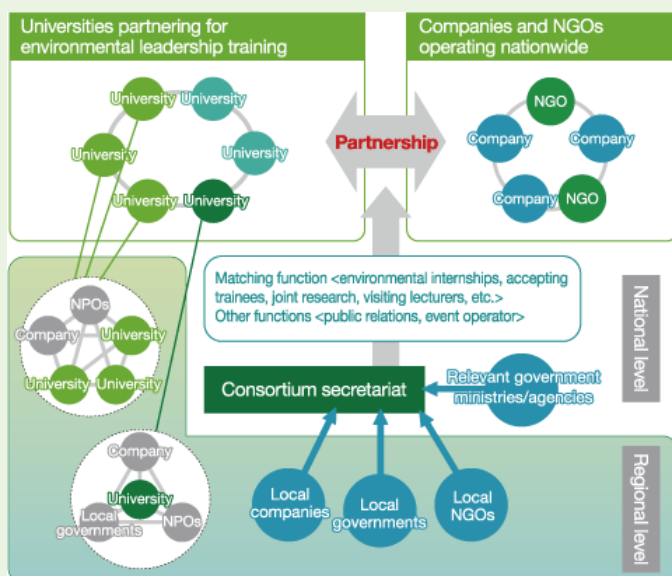
Examples

- Development of environmental leadership program database and storage of common/shared contents

Consortium Structure

The consortium can be an interactive and cooperative network of universities or a network of universities, companies, NGOs, and government organizations on the national as well as regional level. The Ministry of the Environment,

working jointly with relevant government ministries and agencies, began providing support for launching a national consortium for environmental leadership training in 2008.



Vision for establishing a consortium

The establishment of an environmental leadership training consortium and its sustainable development requires:

1. Strategy for autonomous development

Establish a mechanism that makes all participating organizations beneficiaries so as to instill a sense of ownership, allowing for the consortium's autonomous development both in terms of financial and operational aspects.

2. Leveraging existing networks to maximize partnership strengths

Develop organic relationships with existing networks of environmental leadership organizations and programs such as IR3S as well as university consortiums to share knowledge and experiences.

3. Liaison and coordinating function

Serve as a liaison or coordinator for Japanese and overseas organizations to accelerate government-industry-academia cooperation.

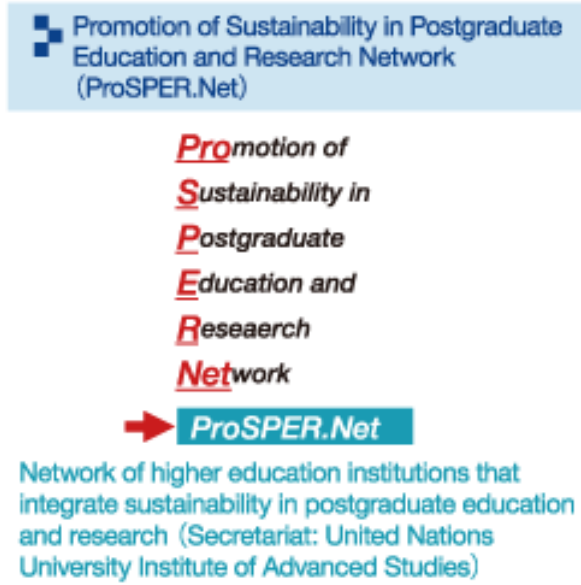
4. Phased development of activities and networks

Implement activities in phases according to participants' needs. Conduct activities mainly in Japan as a first step with an eye to enhancing cooperative relationships with other Asian countries in the future.

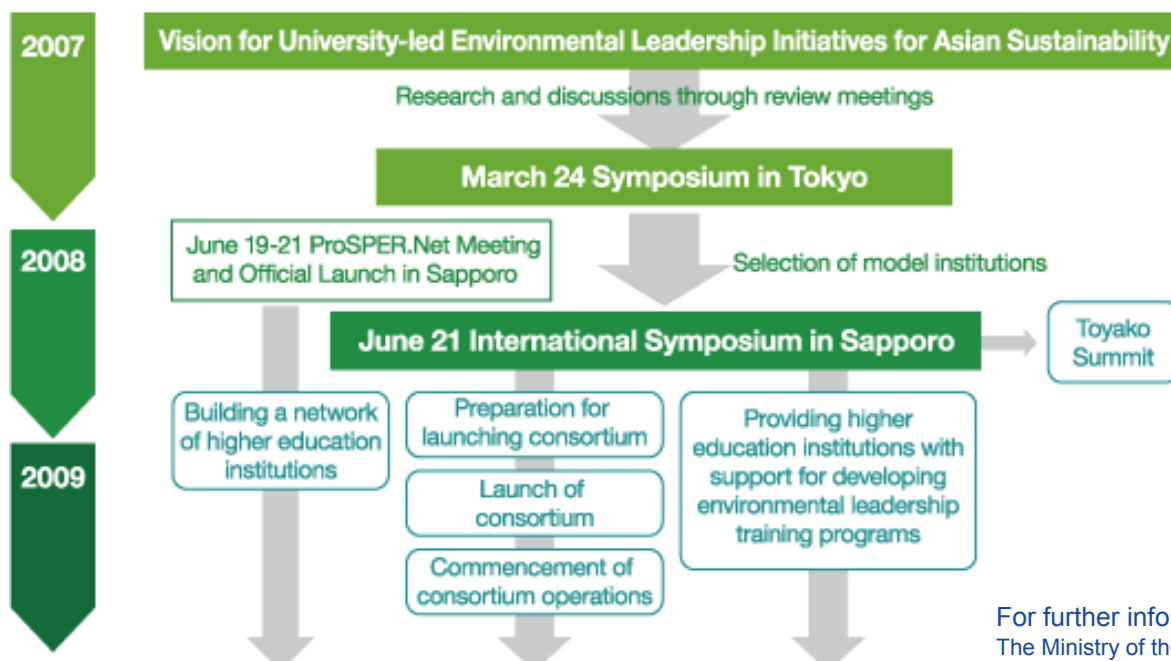
Environmental Leadership Initiatives for Asian Sustainability (ELIAS) 3 Building a Network of Universities in Asia for Environmental Leadership Training

The Ministry of the Environment supports the networking of universities in the Asia Pacific region to train people who will be able to apply their environmental skills throughout Asia. The Ministry has been working jointly with the United Nations University Institute of Advanced Studies since fiscal 2007. It started working on developing a network of higher education institutions that are committed to integrating sustainability in their postgraduate education and research programs in November 2007. Dubbed ProSPER.Net (short for the Promotion of Sustainability in Postgraduate Education and Research Network), as of June 2008 the network boasts a roster of participating members that includes fifteen universities and international organizations from Japan, China, the

Republic of Korea, ASEAN countries, India, and Australia. The network is expected to grow to include more educational institutions in the near future. Following a preliminary investigation and analysis meeting held in March 2008, ProSPER.Net was officially launched at the second ProSPER.Net meeting held in Sapporo in June 2008. Activities of the network may include: 1. sharing of teaching materials and programs, 2. joint program development and implementation through resource- and knowledge-sharing, 3. faculty and student exchanges, and 4. the building of an Asia-wide network of highly capable environmental human resources.



Timeline



For further information
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