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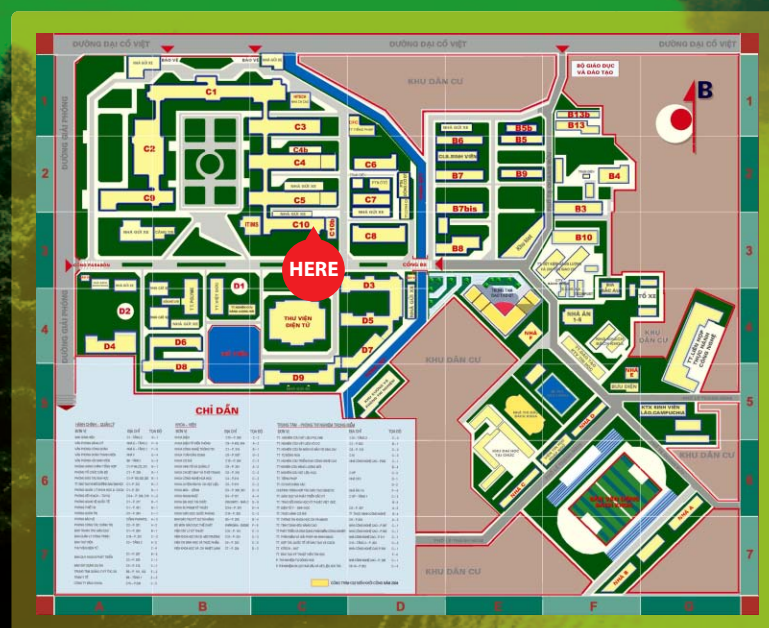
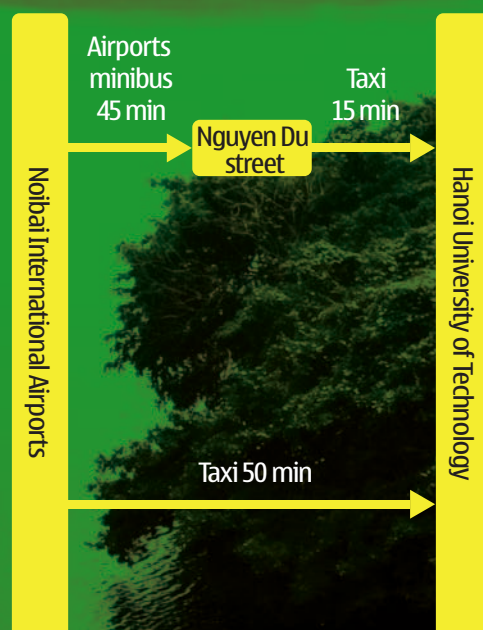
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## KYOTO UNIVERSITY - HANOI UNIVESITY OF TECHNOLOGY RESEARCH AND EDUCATION PROGRAM FOR ENVIRONMENTAL STUDIES



### ACCESS



# THINK GLOBALLY, ACT IN VIETNAM

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## GREETINGS



Prof. Shigeo Fujii  
GSGES, Kyoto University

Kyoto University's new big projects, EML and HSE are pursuing international research and education activities in the field of environmental studies. We consider Vietnam is one of the most important countries to implement these activities. Fortunately, we have established good relationship on research and education collaboration with Hanoi University of Technology, and have launched the KU – HUT research and education program for environmental studies. We expect this program to promote research projects in Vietnam, to increase student exchange between both countries, to stimulate formation of many collaboration works, and to contribute other activities beneficial to both countries. I believe the successes of this program may contribute not only to both countries of Vietnam and Japan, but also to the world in the field of environmental studies.



Assoc.Prof. Huynh Trung Hai  
INEST, Hanoi University of Technology

In the rapid progress of industrialization and modernization, Vietnam has been facing a lot of environmental problems that need to be solved towards sustainable development. Therefore, it is required to develop human resource in the field of environmental management as well as in the field of human security engineering. Regional and global integration is a challenge but is an opportunity for our country and especially for Institute for Environmental Science and Technology – Hanoi University of Technology to promote scientific research and education as well as to develop human resource. By cooperation with international partners, particularly with Kyoto University, I strongly believe that fruitful information and experience exchange in these fields could be obtained; our staff ability could be improved; as well as environmental related activities that is suitable for Vietnamese condition will be promoted.

## ABOUT HANOI, VIETNAM

Hanoi - a city located on the right bank of the Red River - has been the capital of Vietnam since nearly 1000 years. It is the important political, administrative centre and one of the largest cultural, scientific, educational, economic and international trade centre of Vietnam. In 2008, Hanoi is extended to become a larger city with the total area of 3,344.7 km<sup>2</sup> and the new population of 6.2 million. Hanoi is developing rapidly but also facing many environmental problems related to water pollution, air pollution and solid waste management. It is, therefore, a typical developing city for urban environmental study.

## ESTABLISHMENT OF THE PROGRAM

The program is a platform for the development of joint researches and education in the domain of environmental and related studies between Japan and Vietnam.

- December 2008: Establishment of the program
- September 2009: General Memorandum for Academic Cooperation and Exchange between Kyoto university and Hanoi University of Technology



## PROJECTS



The Kyoto University Global Core Center of Excellence Program: "Global Center for Education and Research on Human Security Engineering for Asian Megacities" - GCOE - HSE

- aims at establishing a new discipline "urban human security engineering" and create a network of overseas bases for research and education in Asian-wide scale to foster next generation researchers and high-level practitioners.
- funded by the Ministry of Education, Culture, Sports, Science and Technology-Japan (MEXT) <2008-2013>
- GCOE HP: <http://hse.gcoe.kyoto-u.ac.jp/index.html>



Environmental Management Leader Project : "Kyoto University International Center for Human Resources Development in Environmental Management" - EML Project

- aims at fostering environmental management leaders in Asian countries, providing multi-disciplinary course work in environmental management, long-term internship, term project, and thesis research.
- funded by the Ministry of Education, Culture, Sports, Science and Technology-Japan (MEXT) <2008-2013>
- EMLHP: <http://www.ges.kyoto-u.ac.jp/cyp/modules/jst/english/>

## EDUCATION

Hanoi is an ideal place to learn typical urban and sub-urban environmental issues in developing countries such as basic sanitation, wastewater treatment, solid wastes management, water and air quality conservation. Our program provides opportunities of long-term and short-term internship (GCOE-HSE and EML) for students from Japan, and EML short-term courses for ones in Vietnam, and thesis researches etc.

In addition, the program is a contact point of students, who want to study in Kyoto University. In FY2009, we supported students to join the three programs: the JENESYS student exchange program (one-year study in Kyoto University), the doctoral course of the Kyoto University GCOE-HSE and EML program, and the master course of the Kyoto University EML program.



## RESEARCHES

The program provides various opportunities of environmental studies, especially around Hanoi area, such as environmental field works and experimental studies in our laboratory etc. The followings are on-going research examples. We welcome your joint-researches with our program!



### Sanitation strategy study for Asian cities

Sanitation, here focusing on excreta and sewage management, is a common challenge in many Asian cities. We are conducting the following sanitation studies around the Hanoi area: 1) methodology development for the understanding of sanitation management constraints and the evaluation of alternatives (SaniCon-Asia project), 2) material cycle study (P, N, C) with consideration of urbanization effects, and 3) study of resource-oriented excreta management including urine-diversion practices.



### Anaerobic digestion of municipal solid waste (MSW) in Hanoi

Most of MSW in Hanoi is disposed by direct land-filling although it contains 40-60% of biodegradable matters that can be treated by anaerobic digestion for resource recovery. With anaerobic digestion, organic wastes can be stabilized at a reasonable cost while generating biogas - a source of energy. Our study aims to find out the biogas potential of the waste and to establish a simple and low-cost anaerobic digestion process to treat them.

## OTHER ACTIVITIES



Student Interview  
HUT, Dec. 2008



Exhibition in Sakura Festival,  
Hanoi, Apr. 2009



Japan Study Workshop  
HUT, Sep. 2009



Research Workshop  
INEST, Nov. 2009