

# N<sub>ewsletter</sub>



Global Center of Excellence (GCOE)  
Kyoto University-University of Malaya



Kyoto University Global COE Program  
Global Center for Education and Research on  
Human Security Engineering for Asian Megacities



Special Coordination Funds for Promotion Science and Technology  
Strategic Program for Fostering Environmental Leaders  
International Center for Human Resource Development in  
Environmental Management



2011.08.  
**Issue 1 Vol. 1**

A short visit and meeting with Kyoto University's Executive Vice President (External Affairs and Alumni) and delegates at GCOE KU-UM office (June 29, 2011).

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The new members in the organization of GCOE KU-UM; Dr. Nobumitsu Sakai; Working Committee (end left) and Azizi Abu Bakar; Research Assistant (end right).

*GCOE KU-UM is an international program under:*



SUSTAINABILITY SCIENCE  
CLUSTER



## ***Welcome Message from UM Deputy Vice-Chancellor (Research & Innovation)***



***Professor Dr. Hamzah Hj. Abdul Rahman***

**UM Deputy Vice-Chancellor  
(Research & Innovation)  
University of Malaya**

International collaboration is a process which can enhance research activities across international boundaries. The long standing academic rapport between Kyoto University and University of Malaya has resulted in successful exchange of knowledge by researchers in multi-disciplinary areas since the 1990s. The GCOE KU-UM program is designed to promote world class research hub in human security engineering and foster the next generation of leading researchers who are talented and will give birth to new knowledge and wisdom to tackle global problems and cultivate rich fields of knowledge. The Japanese funding bodies particularly JSPS (Japan Society for the Promotion of Science) and MEXT (Ministry of Education, Culture, Sports, Science and Technology) are the partners supporting this program. Collaboration with international partners such as is deemed necessary in order to maintain and strengthen Japan's leading position within the global scientific community. Globalization in research activities has exerted a direct impact on university research planning strategy and knowledge dissemination via publication such as this is important to steadfastly expand and enrich the knowledge gained. May I extend best wishes for a fruitful future and sustainable sharing of knowledge.

## ***Message from GCOE KU-UM Coordinator***

The University of Malaya has successfully established long term collaboration with Kyoto University stretching more than two decades notably under the JSPS-VCC program. The year 2010 gears up another avenue of research collaboration in the form of an offshore base of Kyoto University known as Global Center of Excellence Kyoto University-University of Malaya or in abbreviation GCOE KU-UM. During the official launch in January 2010, two projects kick start the function of this offshore base namely Global Center for Education and Research on Human Security Engineering for Asian Megacities (GCOE-HSE) and the International Center for Human Resource Development in Environmental Management (EML). GCOE KU-UM has three objectives as its instrument of concern: 1) To carry out relevant corporative research projects, 2) To recruit potential doctoral students, and 3) To construct an innovative academia in the related fields.

The year 2011 saw the initiation of new program which is Asian Core program. All of these three programs have core elements based on collaboration of research in an international set up. In the future as in the past, it is hope that continuation of this collaboration will produce more new research areas which can lead to innovation of environmental system, technology and solving problems particularly for Asian countries. In order to move forward, I humbly request for your great support and cooperation not only among universities but also government bodies, government linked companies (GLCs), NGOs, industries and local communities. Thank you.



***Professor Dr. Nik Meriam Nik Sulaiman***

**GCOE KU-UM Coordinator  
Dean of Sustainability Science (SuSci) Cluster  
Senior Professor  
Chemical Engineering, Faculty of Engineering  
University of Malaya**

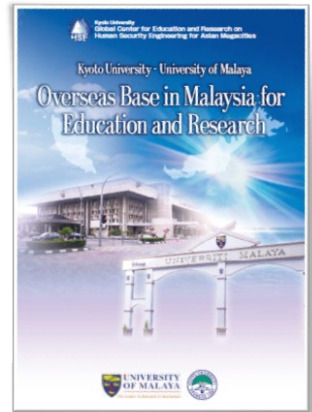
*The coordinator is also the Holder of Dr. Siti Hasmah Chair under the auspices of the Women's Graduate Association of Malaysia.*

# Memorabilia

京都大学



UNIVERSITI  
MALAYA



**The opening ceremony of Kyoto University—  
University of Malaya Overseas Base in Malaysia for  
Education and Research on 20<sup>th</sup> January 2010.**

**Above:** The official pamphlet design for the opening ceremony.



**Left:** Tan Sri Prof. Dr. Ghauth Jasmon (UM Vice Chancellor) with former Japan Ambassador; H.E. Masahiko Horie. **Middle:** The official launching ceremony. **Right:** Signing of guest book in GCOE KU-UM office.



**From left:** Prof. Dr. Yoshihisa Shimizu, Prof. Dr. Yuzuru Matsuoka, Prof. Dr. Shigeo Fujii, Prof. Dato' Dr. Jamil Maah, H.E. Masahiko Horie, Prof. Dr. Koichi Oshima, Tan Sri Prof. Dr. Ghauth Jasmon, Prof. Ir. Dr. Mohd Jailani Mohd Nor, Prof. Dr. Nik Meriam Nik Sulaiman.



**Right:** The new IPPP building where the GCOE KU-UM new office will be transferred by December 2011. The new building is just next to GCOE KU-UM former office at Institute of Graduate Studies (IGS) (upper right side).



Kyoto University Global COE Program

# Global Center for Education and Research on Human Security Engineering for Asian Megacities

The program commenced in academic year 2008 and will establish a new discipline called “Urban Human Security Engineering”. Its aim to strengthen and enhance the education and research functions of graduate school to foster highly creative young researchers who will go on to become world leaders in their respective fields through experiencing and practicing research of the highest world standard. In order to establish this discipline, it will integrate four existing fields of urban governance, urban infrastructure management, health risk management and disaster risk management into one discipline and strive for complementary collaboration across the study and research areas. The program also will disseminate the new discipline through the publication of a textbook series in English language.

## Human Security Engineering



Program Leader:

**Yuzuru Matsuoka**

Professor

Department of Environmental Engineering,  
Graduate School of Engineering,  
Kyoto University

### URBAN GOVERNANCE

Strategies and techniques for establishing a system in which citizens and related stakeholders work together to enhance human security based on local characteristics.

### URBAN INFRASTRUCTURE MANAGEMENT

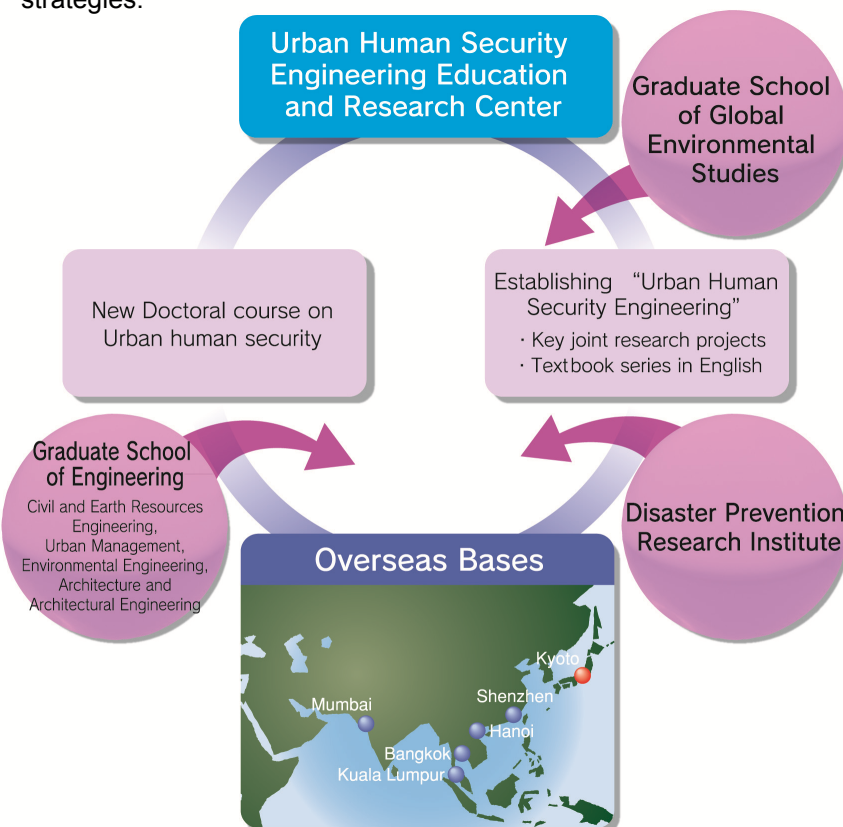
Techniques for developing and planning city infrastructure with consideration not only to financial management but also to the social value of preventing and mitigating disasters and environmental hazards from the perspective of urban management.

### HEALTH RISK MANAGEMENT

Innovative and localized technologies for urban sanitation and environment and developing relevant strategies.

### DISASTER RISK MANAGEMENT

Comprehensive disaster risk management plans and policies of cities and a methodology to implement its strategies.



Schematic diagram of HSE program's concept

The program will conduct the following activities:

1. Human Resource Development: establish a new doctoral program (20 students per year).
2. Research Activities: promote key joint research projects and organize many international symposia and workshops.
3. Management of Overseas Bases: operate the “Urban Human Security Engineering Education and Research Center,” and establish and develop a network of overseas bases for activity and cooperation.

The program welcomes your participation as:

1. Doctoral student
2. Partnership institution, organization and company.



# International Center for Human Resource Development in Environmental Management

Environmental Management Leader Program



Program Leader:

**Shigeo Fujii**

Professor

Graduate School of Global Environmental Studies,  
Kyoto University

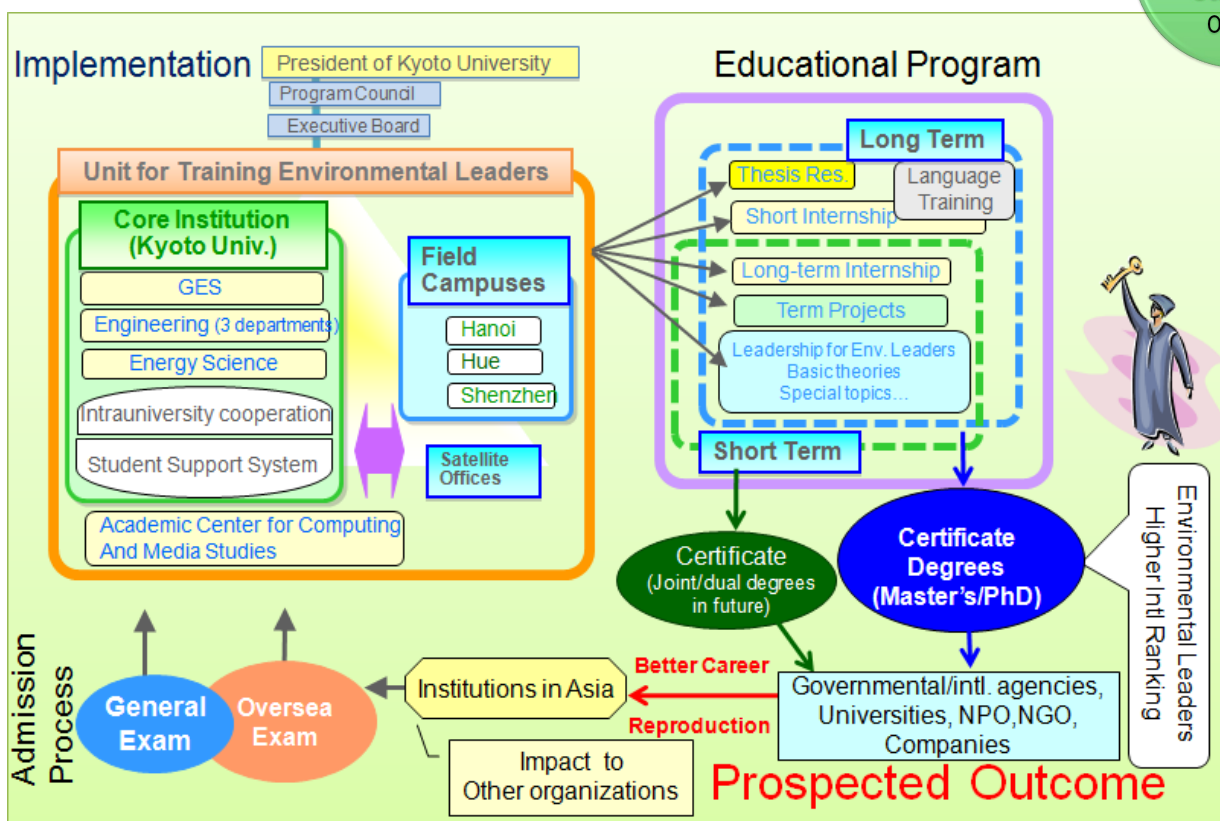
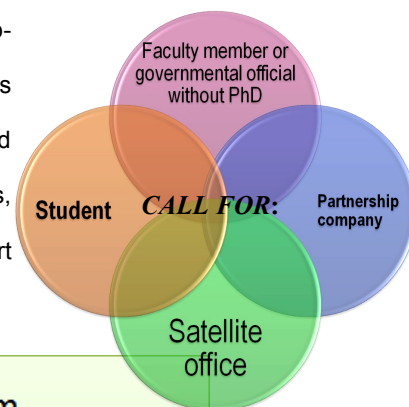
This is a strategic program for fostering environmental leaders. The three graduate schools, Global Environmental Studies, Engineering and Energy Science are taking the lead in this university-wide project. In this program, to meet the demand of developing countries, through various research projects, we will foster environmental leaders who have the ability to solve environmental problems in Asia. For this purpose the program provides multidisciplinary coursework for understanding the situation in Asia, long term internships for experiencing the duties of environmental leaders from problem finding to the presentation of solutions and thesis research directly related to environmental issues in Asia.

*The key features of the program:*

- Multidisciplinary coursework (Lectures in English)
- Strong emphasis on practical aspects (Internship program)
- Thesis research

*About this program:*

- 1) Continues for five years to foster environmental leaders who can solve environmental problems in Asian countries.
- 2) Is funded by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) as a part of "Strategic programs for cooperation in science and technology for Asia and Africa".
- 3) Is run by Kyoto University as the core institution with close cooperation with overseas field campuses and partnership institutions, organizations and companies.
- 4) Provides multidisciplinary coursework in environmental management, long term internships, team projects and thesis research.
- 5) Will educate Masters and Ph.D. students through a long-term program, will provide a short term program at each overseas field campuses.

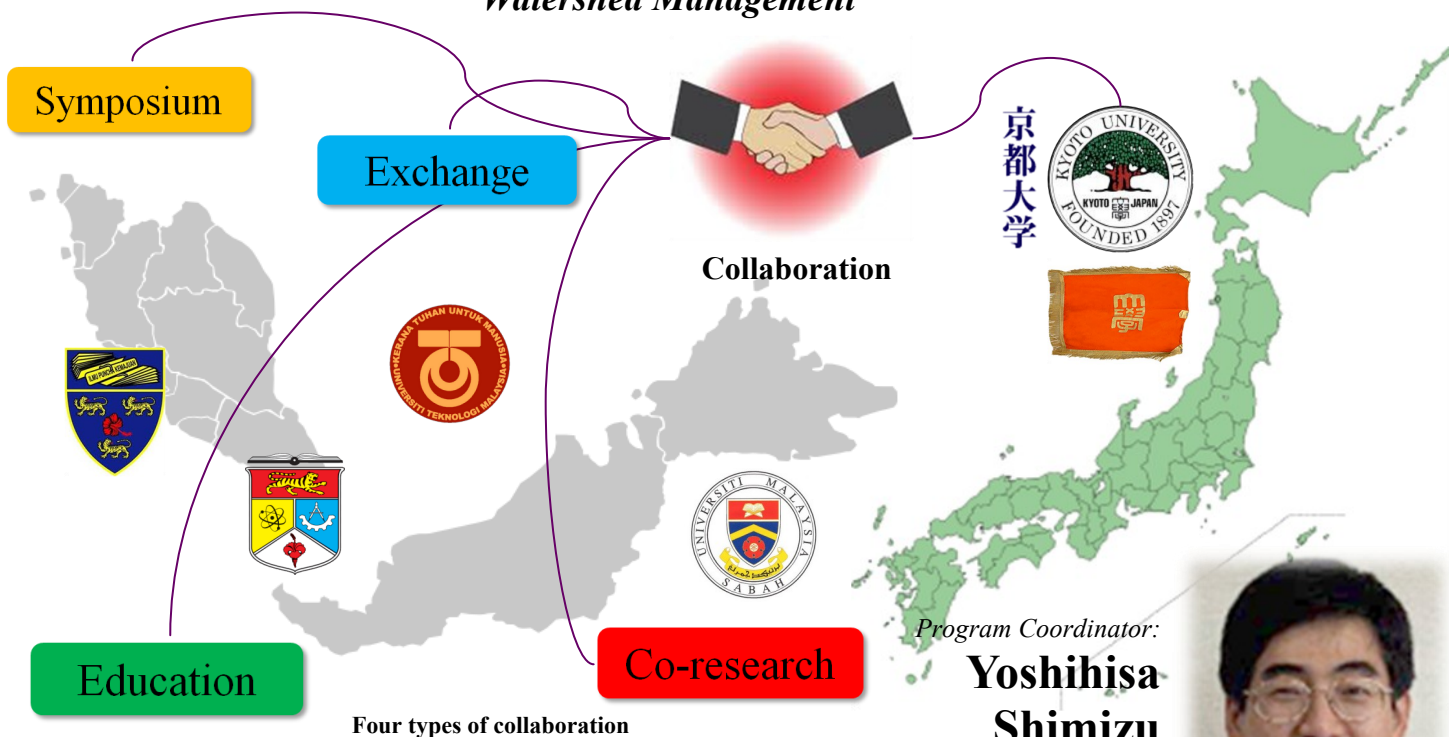


Schematic diagram of EML program's structure

# ASIAN CORE PROGRAM



## Research and Education Center for the Risk Based Asian Oriented Integrated Watershed Management



The bid of the program was coordinated by Kyoto University and University of Malaya in 2010 (UM as the coordinator in Malaysia) and the other supporting Malaysia universities are UKM, UTM and UMS. The duration of this program is according to the Japanese financial year starting from April 2011 to March 2016. The research topics deemed to be of cutting-edge and high international importance (including all fields, i.e. *humanities, social sciences and natural sciences*).

**Professor**  
Graduate School of Engineering  
(Research Center for Environmental Quality Management)  
Kyoto University



### Group 1: Hydrology



### Group 3: Risk Assessment



### Group 2: Water Quality



### Group 4: Governance



Four research groups under Asian Core program

# ACTION RESEARCH

Transitioning Low-Income Urban Communities towards Environmental Sustainability: An Action Research at Kondo Rakyat Community in Kuala Lumpur



UNIVERSITI MALAYA



The Project Coordinators:



**Abdul Aziz Abdul Rahman**

Associate Professor  
Department of Chemical Engineering,  
Faculty of Engineering,  
University of Malaya



**Zeeda Fatimah Mohamad**

Senior Lecturer  
Department of Science & Technology  
Studies, Faculty of Science,  
University of Malaya



**Noor Zalina Mahmood**

Senior Lecturer  
Institute of Biological Sciences,  
Faculty of Science,  
University of Malaya



► A collaborative effort between the **Kondo Rakyat** (Pantai Dalam, Kuala Lumpur) community with their neighboring communities i.e. Telekom Malaysia (TM), University of Malaya, and Unilever to transform Kondo Rakyat into a more **environmentally sustainable living area**.

## Research Objectives:

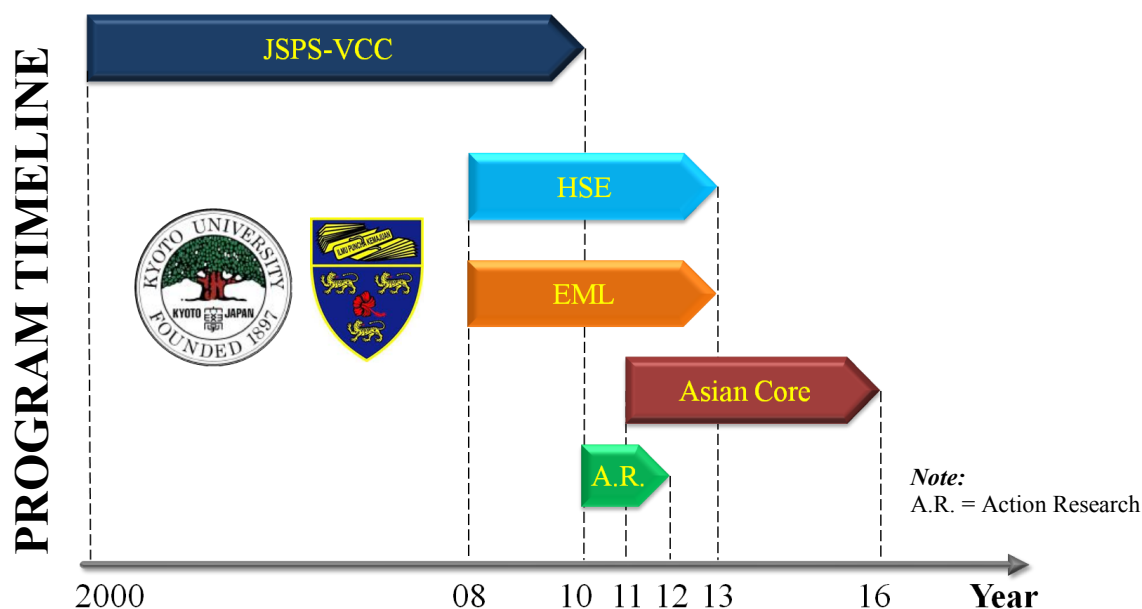
- 1) To analyze several cycles of action research experiments, in order to initiate and assist the transformation of the Kondo Rakyat community towards higher commitment in environmental sustainability.
- 2) To apply systemic evaluation and reflection of the effectiveness for the action research experiments in achieving its objectives and to use the results of the evaluation and reflection to improve the experiment further in subsequent cycles.
- 3) To develop a comprehensive report on lessons learned from the Kondo Rakyat experience not only for academic publication but also for public reading and dissemination.

\*Four sustainability projects have been shortlisted for the research namely *used-cooking oils*, *green bazaar*, *kitchen garden* and *composting*.

Table 1 Four projects and its objectives under the Kondo Rakyat action research

NO	PROJECTS	OBJECTIVES
1.	<b>Used-cooking Oil</b>	To create awareness, provide facilities as well as mechanism for a systematic used-cooking oil collection. This oil can then be sold to generate side-income for the community. Mitigation of water pollution can also be addressed through this project.
2.	<b>Green Bazaar</b>	To set-up an iconic green bazaar for recyclables and environmentally friendly-based products at Kondo Rakyat. This project will encourage the practice of recycling and entrepreneurship activities amongst the Pantai Dalam community.
3.	<b>Kitchen Garden</b>	To fully utilize empty lands in the Kondo Rakyat compound by planting various species of edible plants. These plants can be used personally by the community or can be sold at the Green Bazaar. The concept of '1 Rumah 1 Pokok' (1 Plant per Home) will also be introduced in the project.
4.	<b>Composting</b>	To train the community of Kondo Rakyat about composting techniques and to deliberate the possibility of establishing composting facilities in the Kondo Rakyat.





Programs and its duration under international collaboration between Kyoto University and University of Malaya

#### *Programs Contact Information*

HSE program:

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Phone: +81-75-383-3412/3413  
Fax: +81-75-383-3418  
Web: <http://hse.gcoe.kyoto-u.ac.jp>

EML program:

**Kyoto University EML Office**  
Yoshida-Honmachi, Sakyo-ku, Kyoto, 606-8501, Japan  
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Fax: +81-75-753-5923  
Web: <http://www.ges.kyoto-u.ac.jp/cyp/modules/jst/english>

Asian Core program:

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