

SEED-Net *News*

Quarterly Newsletter of the ASEAN University Network/Southeast Asia Engineering Education Development Network



AUN/SEED-Net Secretariat

Bldg. 2, Room 109-110, Faculty of Engineering,
Chulalongkorn University, Bangkok, Thailand 10330
Phone: +66-2218-6419 to 21 | Fax: +66-2218-6418
Send your stories or comments to: info@aun-seed.net
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Message from New Academic Advisor



Dr. Hiroshi
SHIRAKAWA
Academic Advisor

As many of you already know, the first phase of the AUN/SEED-Net Project of JICA finished successfully with a lot of welcome results on March 10, 2008. Expectedly and smoothly the following project as the second phase has started from March 11, 2008. Since then, I have joined the Project as Academic Advisor. In reality, I had been involved in the Project's first phase as a supporter in Vietnam and Japan. In this sense I was ready to join the Project even before I became the Academic Advisor for this time.

Thanks to good results and activities through all related institutions and people, up until now, AUN/SEED-Net has earned certain reputation and popularity among ASEAN countries. AUN/SEED-Net should keep and accelerate those momentum to realize the super goals of the Network. Upon the momentum, I would like to emphasize the necessity of sustainable and self-reliant operation. Those are the key words or basic concepts to pursue actively during the second phase.

Still do you remember Dr. Tsunoda, my predecessor? I think many of you well recognize and are impressed with his warm character. He will work for a new project in Egypt to found a new University of Science & Technology (E-JUST). I wish him success in Egypt and expect fruitful linkage between the AUN/SEED-Net and E-JUST soon.

Dr. Tsunoda contributed to a lot of activities of the Project during the first phase. We cannot be the same without him; however, we should be expected to try to do our best to enhance the Network as usual. Finally, I hope the Network will have more popularity in terms of quality throughout Asia.

Dr. Hiroshi SHIRAKAWA
Academic Advisor



- ★ Upgrading of faculty qualifications
- ★ Graduate program enhancement
- ★ Establishment of joint activities and human linkage
- ★ Systematic information dissemination, activity management, and communication network

Project Review & Future Direction

During the five years of Phase I, AUN/SEED-Net successfully upgraded faculty qualifications of the member institutions through higher degree acquisition, since almost 90% of our scholars returned to work as faculty members of their institutions and produced more capable engineers needed for the region's development. It also encouraged the launch of new graduate programs or international programs as well as the enhancement of existing programs to the international level. And over 200 collaborative research projects, which were funded by the AUN/SEED-Net Project, notably multiplied the numbers of research activities, journal publications, conference papers and proceedings in engineering field.

Joint activities and human linkage among ASEAN and Japanese institutions were strengthened through supporting activities provided by the AUN/SEED-Net such as visits and exchanges of staff, field-wise seminars, and research collaboration. These activities not only facilitated academic cooperation and joint supervision of students, but also helped enhance capacity of the member institutions.

It also initiated academic and research collaboration in critical areas. The Workshop on Disaster Mitigation and Management in ASEAN Countries arranged in Phuket, Thailand, in 2005; the Distance Learning Program on Earthquake Engineering run since

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Project Review & Future Direction

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2005 between Chulalongkorn University and Tokyo Institute of Technology; and the Emergency Response Program to the Java earthquake conducted by Gadjah Mada University, Kyushu University and Kyoto University are all examples of the Network's contributions to the region in the past.

AUN/SEED-Net generated some remarkable impacts to the region. ASEAN became the interesting option for higher education in engineering, other than western countries, because of improved curricula, cost-effectiveness, and cultural similarity. Moreover, the Network built up friendship and mutual understanding among

scholars and academics in various ASEAN countries, which can contribute to the future ASEAN integration. Many Memorandums of Agreement/Understanding among the member institutions and with the Japanese supporting universities therefore were fostered through AUN/SEED-Net. Based on these achievements, the AUN/SEED-Net Project was highly recommended by all stakeholders to be continued.

Phase II of the AUN/SEED-Net Project has started from March 11, 2008 for five years, with considerable supports from the Japanese Government through JICA, the governments of the member countries and the member institutions, the ASEAN Foundation, and other organizations. With the purpose to establish **a sustainable framework of human resource development network in engineering field under the ownership of the ASEAN countries, contributing to regional development**, the AUN/SEED-Net would enhance the capacity of its member universities, collaborate on research for industry and community, strengthen regional engineering network, and step towards the Graduate School Consortium of Engineering among ASEAN - Japan.

Significantly, the Network will extend its outreach to involve non-member institutions, as well as industrial and government sectors, to empower its alumni network, and to set out interdisciplinary research on the region's common issues; namely **Biotechnology, Disaster Mitigation, Global Environment, Natural Resources & Materials, and New & Renewable Energy**. With the belief in the network power and spirit, it is believed that the Network would be able to offer great help and suitable technologies to mitigate or solve the key problems that occurred in ASEAN and in the world.

OUTPUTS IN PHASE I

- 445 scholarships (311 master's, 66 doctoral in ASEAN, 56 doctoral in Japan & 12 direct doctoral in Singapore)
- 190 master's and 24 doctoral graduates
- 222 collaborative research projects (US\$ 2,343,848)
- Over 300 research publications
- 94 special equipment items (US\$ 798,439)
- 385 dispatches of Japanese professors to ASEAN
- 193 dispatches of ASEAN faculty staff to Japan and
- 40 dispatches to other member institutions in ASEAN
- 92 field-wise seminars
- 238 promotional trips by host institutions

Japanese professor visiting ASEAN member institutions



Departments of Electrical Engineering of CU and UGM on MOU signing



New Appointments



As from April 1, 2008 Dr. Hiroshi SHIRAKAWA has been appointed as Academic Advisor for the JICA Project for the AUN/SEED-Net, in succession to Dr. Manabu TSUNODA.



From April 1, 2008 onwards, Ms. Siriporn Rungrueangtanya (left) and Ms. Kalayaporn Teungfung (right) have been promoted to be Program Coordinators. Ms. Siriporn is in charge of Information & Communication Technology (ICT) field and Mechanical & Aeronautical Engineering (ME/AE) field. Ms. Kalayaporn is in charge of Electrical & Electronics Engineering (EEE) field and Geological Engineering (GeoE) field.

Ms. Kanchana Patanasakdikul has joined the AUN/SEED-Net office since April 21, 2008 as Program Officer in charge of Civil Engineering (CE) and Materials Engineering (MatE) fields.



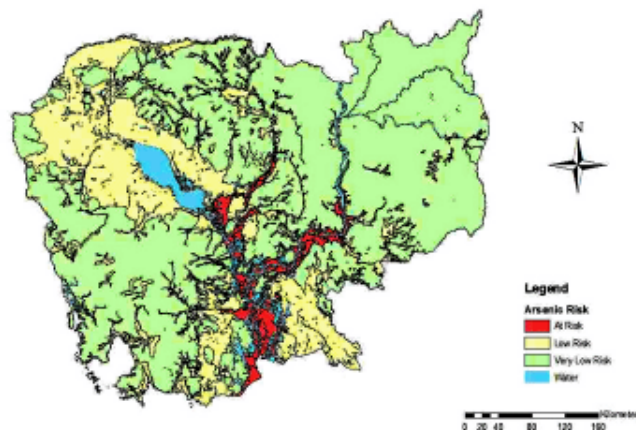
Ms. Karnkitti Patanasuthikul has joined the AUN/SEED-Net office as Program Officer in charge of Manufacturing Engineering (ManuE) since May 20, 2008.

Research on Drinking Water

By Dr. Davin Uy, Director of Research and Development, Institute of Technology of Cambodia

Drinking water is one of the concerned issues in Cambodia. Nowadays, less than 20% of the whole population can access to safe drinking water. Risks of microbial and chemical contaminations in the drinking water in Cambodia need to be minimized as soon as possible to reduce diseases such as diarrhea and arsenicosis. Solutions for mitigating the problem such as education for awareness and development of systems that are economically and socially accepted by the community are highly demanded and encouraged. Research on drinking water, thus, becomes attention-grabbing as it offers technological support to Ministry of Rural Development (MRD), Ministry of Industries, Mines and Energy (MIME), and NGOs for developing strategies and/or suitable solution for people.

Arsenic Risk Map



Patient suffered from contaminated water

Since research development is one of the core objectives of the Institute of Technology of Cambodia (ITC) for improving its training and contributing to the development of the country, ITC orchestrates the research on drinking water by linking with Ho Chi Minh City University of Technology (HCMUT) for research partnership because the same problem is still active in Vietnam. We are now working on the evaluation of groundwater chemistry and the

ITC orchestrates the research on drinking water by linking with HCMUT for research partnership.

development family scale filter for removing both microorganisms and arsenic from surface and groundwater; and we will be collaborating on the use of catalyst to remove the active microorganisms very soon. ITC also develops partnerships with MRD and NGOs for their support and use of research results, Center of International Cooperation and Research on Agricultural Development (CIRAD), France, and Massachusetts Institute of Technology (MIT), USA, for increasing research capacity and support to attain the above objective in the coming years.



Dr. Davin Uy during field water testing



Filter preparation

For ITC, AUN-SEED/Net is an excellent network on one hand for linking researchers in the ASEAN region to work together on the development of technologies and the enhancement of cultures and friendships, and on the other hand for supplying highly qualified graduate students in both master's and PhD levels who return to their countries to work in the research section and training. Host institutions and Japanese universities are playing an important role in improving our research ability through their academic quality and experience in related fields.

(For research collaboration and results, please contact Dr. Davin Uy at davinuy@itc.edu.kh)

AUN/SEED-Net Coordinator Meeting 2008

Coordinators from 19 member institutions of the AUN/SEED-Net network met at the AUN/SEED-Net Coordinator Meeting for 2008 during April 24-25, 2008. The meeting, attended by over 40 participants, was held at Chulalongkorn University in Bangkok to exchange information and good practice for the management and administration of AUN/SEED-Net activities among the member institutions, and to fine tune action plan for the fiscal year 2008 as well as working direction towards the network's objective to be the sustainable network for human resource development in engineering, contributing to ASEAN development and belonging to ASEAN countries.



At the meeting, AUN/SEED-Net Secretariat introduced eight programs supporting its main activity of graduate degree scholarship programs to develop engineering human resources. Some programs had been continued from last year such as Collaborative Research and Japanese Professors Dispatch. Several others were newly designed or modified, e.g. Regional Conference upgraded from the previous Field-wise Seminar, Research Support for Alumni Members, Short-term Training/ Research in ASEAN and Japan, and Faculty Staff Dispatch to Cambodia, Laos, Myanmar, and Vietnam where educational capacity building was still in a great demand. These programs would be implemented from April 2008 onwards.



Faculties of engineering of the 19 member institutions also agreed to join hands in conducting interdisciplinary research in five areas: Biotechnology, Disaster Mitigation, Global Environment, Natural Resources and Materials, and New and Renewable Energy for industries and communities in ASEAN. Proposals of researches would be made and proposed to attract funding from the Japanese Government, ASEAN bodies, government and industrial sectors.

In the past years, the member institutions used the AUN/SEED-Net network as a channel to broaden relationship and promote their institutions to other institutions, leading to many Memorandums of Agreement and academic assistances extended to each other. These effective uses of the network would be retained by all member institutions, while attempting to promote the network's benefits to outsiders and policy makers.



Upcoming Events

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| July 22, 2008 | Workshop on Lab-Based Education and University - Industry Linkage in Indonesia: Sharing experience and moving forward together @ Institut Teknologi Bandung, Indonesia |
| July 23 - 24, 2008 | The 1st Regional Workshop on Mechanical & Aerospace Engineering and Inauguration of Indonesia Section of JSME International Chapter @ Institut Teknologi Bandung, Indonesia |
| July 30 - 31, 2008 | Asian Mining Education Network Foundation Seminar @ Centara Duangtawan Hotel, Chiang Mai, Thailand |
| July 31 - August 1, 2008 | The 1st Regional Workshop on Geological and Geo-Resources Engineering Research in ASEAN: Sustainable Geological Engineering and Geo-Resources Education @ Centara Duangtawan Hotel, Chiang Mai, Thailand |
| August 18 - 19, 2008 | The 1st Regional Workshop on Natural Resources and Materials @ Institute of Technology of Cambodia, Phnom Penh, Cambodia |
| September 8 - 9, 2008 | The 1st Regional Workshop on Environmental Engineering: Environmental Challenges Facing the ASEAN Region @ Richmonde Hotel, Manila, the Philippines |