Annual Report - Department Energy, Environment & Climate Change


You will find insight into our vision and approach to higher education, as well as the characteristics of our students, our academic programs and our faculty in the report.

The report provides an overview of the key events and developments, including the most important facts and figures. It highlights the academic, co-curricular and extracurricular activities, student field trips, student thesis, research and dissertations, publications and outreach in the department.

It also brings into focus the grants and sponsored research projects by the faculty members under the department. The report provides you with both a picture of the department today, and the areas for growth and development for the future.

Whiteboard Animation Videos

In keeping with the wave of the digital transformation era, the Department of Energy, Environment and Climate Change released its first Whiteboard Animation Video introducing the department and its academic programs and specializations.

We believe whiteboard videos are simple yet powerful tool to convey the most complex concepts and ideas. With a carefully crafted script, any message can be summed up in a 60 second video. These quick and engaging whiteboard videos are expected to boost the reach to the prospectives, alumni and donor industry.

It will serve as an additional channel of communication to the masses. Several of such whiteboard animation videos are in the pipeline and expected to release in early March.

We invite you to watch our video here...
Prof. Nguyen Thi Kim Oanh’s Research Collaborations
11th December 2017 - 19th January 2018, Berkeley, USA

Prof. Nguyen Thi Kim Oanh travelled to the USA to work with the research group of Prof. Kirk Smith at the School of Public Health, University of California, Berkeley. Prof. Kim, along with Prof. Kirk Smith and Prof. Eri Saikawa from Elmory University, jointly prepared a research proposal titled “INTeGRated approach to minimize rice straw open burning in Southeast Asia (INTER-SEA)” and submitted to the PEER grant program. The proposal is a collaborative work between AIT and the US partners (Prof. Kirk Smith and Prof. Eri Saikawa) and involve collaboration with Indonesia.

While away from AIT, Prof. Kim published 3 papers as the corresponding author with her doctoral students.

Official Inauguration of TORUS Cloud Server at AIT
5th February 2018, Asian Institute of Technology, Thailand

The official inauguration of the TORUS Cloud Server was held on 5th February at the Asian Institute of Technology. AIT has been equipped with a high-level cloud computing server, pre-operational since October 2017 and started offering its full processing capacity in January 2018.

The TORUS project offers various training and research, dissemination and scientific publications through seminars organised by its partners, which includes 8 institutions across Europe and Asia.

The TORUS network consists of Asian Institute of Technology (Pathum Thani, Thailand), University of Walailak (Nakhon Si Thamarat, Thailand), Nong Lam University (Ho Chi Minh, Vietnam), Vietnam National University, Faculty of Engineering and Technology, Hanoi, Vietnam, Universita degli Studi Di Ferrara (Italy), Vrije Universiteit Brussel (Belgium), International School of Information Processing Sciences (Pau) and University of Toulouse 2 Jean Jaures (France). The inauguration was graced by the presence of representatives from the Embassy of France, Dr. Stephane Roy, Attaché for Scientific and Higher Education Cooperation and Mr. Vincent Drapeau, Project Coordinator for Scientific and Higher Education Cooperation, Mr. Nguyen Thanh Tung, Science Department of the Vietnamese Embassy, and Ms. Nuanwan Toththong, the Educator at the Bureau of International Cooperation Strategy, Office of Higher Education Commission.

The 6th Thematic Workshop on TORUS services using HUPI platform
5th - 9th February 2018, Walailak University, Nakhon Si Thammarat, Thailand

Prof. Nguyen Thi Kim Oanh participated in the 6th Thematic Workshop on “TORUS services using HUPI platform” in Walailak University, Nakhon Si Thammarat, Thailand.

The workshop was a planned activity committed by the AIT team under the TORUS project (Toward an Open Resources Upon Services: Cloud of environmental data). The project aims to make operational techniques of cloud computing (CC) in the disciplinary field of environmental science and massive databases (Big Data) for future training and projects in partner countries. The TORUS cloud has been installed at AIT and the content of this workshop was on the use of the HUPI platform for the management of big environmental data.

Prof. Kim, was accompanied by her student, Ms. Nguyen Nhat Ha Chi, at the workshop. The workshop discussed the preparation of the TORUS book. The AIT team would be the lead authors or co-authors of at least 4 chapters related to air quality monitoring and modeling data. The workshop also saw a discussion on the phase 2 of the TORUS (MONTUS) proposal that aims at a graduate master program on “Big data management” in Southeast Asia.

Following the workshop, Prof. Kim attended the Steering Committee Meeting on 9th February and joined the field trip to Ko Samui to observe the integrated organic farming practiced in the Sixth Sense Hotel.

Consultation Workshop on Curriculum Development
6th - 7th February 2018, Cambodia

Dr. Shobakhar Dhakal and Dr. Sangam Shrestha attended a consultation workshop on Curriculum Development for Master of Science in Climate Change at the Royal University of Phnom Penh, Cambodia on Tuesday 6th February 2018. The workshop discussed the course development for the first academic program on Climate Change in Cambodia.

On 7th February 2018 Dr. Shobakhar visited Electricity Du Cambodia (EDC) and discussed possible cooperation between EDC and Department of Energy, Environment and Climate Change. The visit was facilitated by one of the EECC Alumni Mr. Soeun Sophanith, a graduate of 2017.

Dr. Shobakhar also paid a visit to Institute of Technology of Cambodia (ITC) and interacted with perspectives. AIT regularly receives students from ITC, a premier technology institute in Cambodia. Dr. Shobakhar on his Facebook acknowledged Dr. Soy Ty, Deputy Director for Academic Affairs and Dr. Reveth Hin for the support and arrangement.
Prof. Visu invited to Lecture at the IHE DELFT
26th February - 2nd March 2018, IHE-Delft Institute, Netherlands

Prof. Visu was invited by IHE Delft, Institute for Water Education from 26 February to 2 March, 2018.

He was the resource person for the course entitled “Industrial Resource Management and Cleaner Production”, and presented a series of lectures on the topic “Design for Sustainability”.

Prof. Visu also made a presentation on “Development of membrane bioreactor systems for polluted surface water treatment” as part of the Science Communication meeting.

Prof. Visu also met the current IHE coordinator of this program Prof. Maria Kennedy, and had an informal follow-up discussion on the report prepared by the external reviewer for the joint UWEM program.

Adjunct Faculty Dr. Anis Zaman is back for the January Semester

Dr. Anis Zaman has joined back to the Department of Energy, Environment and Climate Change for the January Semester.

Dr. Anis joined AIT as Adjunct Faculty in March 2015. Over the course of 3 years at AIT, Dr. Anis lecture on solar photovoltaic; solar energy and radiation; and solar thermal. He conducted laboratory sessions on solar cell characteristics, and PV system performance evaluation. Dr. Anis has also developed solar photovoltaic module to ensure the topics are aligned with international standards and practices and supervised postgraduate research.

Dr. Anis Zaman has over 18 years of experiences in low-carbon development planning, long-term energy scenario modelling, greenhouse gas inventory and mitigation scenario modelling. He has worked in 12 countries in Asia and the Pacific. As an Independent Consultant, he works for donor agencies, UN systems, and government agencies to provide expert services in technical assistance, policy analysis and capacity building. Dr. Anis is also involved in teaching and research at different universities both in Australia and overseas, and have authored high value articles and reports, and achieved a number of academic awards. Welcome back Dr. Anis.

Doctoral Student Seminar

Integrated Assessment Approach for the Atmospheric Polycyclic Aromatic Hydrocarbons (PAHs) in Phnom Penh, Cambodia

1400 - 1500 hrs. 21st February 2018, Room No. S101, SERD Seminar Room, AIT

Mr. Kok Sothea, a doctoral student of Environmental Engineering and Management, Department delivered a doctoral seminar.

Abstract: Asia has been known as a main contributor to global emissions of toxic air pollution and greenhouse gases. The levels of air pollutants, including trace gases and aerosol, in developing Asian cities are high and often exceeded the WHO guidelines and the respective national air quality standards (NAAQS). Particulate matter (PM) and toxic air pollutants such as polycyclic aromatic hydrocarbons (PAHs) remain a major concern for many Asian big cities, including Phnom Penh of Cambodia. For example, the PAHs levels in Phnom Penh (and also Siem Reap) were reported to be high as compared to those measured in Bangkok, Thailand and Kanazawa, Japan. However, there is still lack of monitoring data hence there is no comprehensive assessment for the levels, associated health effects and the contributing sources of PM and PAHs in the cities of Cambodia. Lack of the scientific information on the air quality is one of the biggest challenges in formulating an effective air quality management plan.

Three Papers of Dr. Shobhakar were published by Top Journal Publishers

Nature Climate Change, a top journal in Climate Change with impact factor of 19.3 published two papers co-authored by the Dr. Shobhakar.

Another paper that call for long-term, cross-disciplinary studies to reduce carbon emissions and urban risks from global warming, was published by Nature.

1) City transformations in a 1.5 °C warmer world, Nature Climate Change (2018)

Abstract: Meeting the ambitions of the Paris Agreement will require rapid and massive decarbonization of cities, as well as adaptation. Capacity and requirement differs across cities, with challenges and....

2) Locking in positive climate responses in cities, Nature Climate Change (2018)

Abstract: Well-intended climate actions are confounding each other. Cities must take a strategic and integrated approach to lock into a climate-resilient and low-emission future....

3) Six research priorities for cities and climate change, Nature (2018)

Abstract: Cities must address climate change. More than half of the world’s population is urban, and cities emit 75% of all carbon dioxide from energy use. Meeting the target of the 2015...
To address the key emerging issues of SDGs, energy, environmental and climate change issues of the 21st century, the Department of Energy, Environment and Climate Change strive for new academic programs, new ways of teaching, fostering skills and innovation, and carries out solutions-oriented research and outreach activities.

With rigorous curriculum and teaching methods specifically designed to produce leaders with communications and empathy who can shape a the globalized tomorrow and foreseeable future, students will be equipped with technical and soft skills with knowledge to adapt with the changing world.

We provide an excellent opportunity for the students to develop a rewarding career path. Not to mention our beautiful residential campus, multinational and multicultural ethos that makes it an ideal place for the future leadership that will need to work beyond cultural and national boundaries.

We are accepting application for the August Semester 2018. We offer generous scholarships for students who can contribute to the learning experience and make a positive impact on society. Check below:

1) Her Majesty the Queen Scholarship
2) GMSARN Scholarship
3) ADB Scholarship
4) AITCV Scholarship (Vietnam citizens only)
5) President Robert B Banks Scholarship
6) Bangchak Scholarship
7) Kurita Scholarship
8) World Bank Graduate Scholarship Program
9) China Scholarship Council (Chinese citizens only)
10) GSEP Scholarship
11) Thai Pipe Scholarship
12) RTG Fellowship
13) AIT Fellowship

We urge those interested in applying to make the necessary preparations and apply early to improve your chances of a scholarship. The scholarship deadline for August Semester 2018 is 31st March 2018.

Complete the application today and/or bring it to the notice of the other aspirants to apply latest by 31st March 2018 to join us for the upcoming August Semester.

Alumni Awarded National Order of Merit Silver

EECC - AIT Alumnus, Mr. Gyem Dorji was awarded National Order of Merit Silver by His Majesty the King of Bhutan for his service of excellence to the nation during the 110th National Day of Bhutan last December.

As per one of Bhutan’s daily newspaper, Kuensel, National Order of Merit for Excellence in Forest and Park Services means that the recipients provided services to the nation with highest dedication and selfless effort in sustainable management of forest resources for the well-being of the people and country.

Mr. Gyem Dorji received his double degree in Masters of Environmental Technology for Sustainable Development, a special program derived from AIT’s partnership with UNESCO-IHE Institute for Water Education in the Netherlands. Mr. Dorji is now one of the aspiring candidates for the upcoming National Council Election in Bhutan.