

E-NEWSLETTER

Department of Energy, Environment and Climate Change
School of Environment, Resources and Development
Asian Institute of Technology



January 2018
Volume II, Issue 1

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Stakeholder Consultation Workshop on Promotion of Sustainable Use of Biomass Briquettes in Nepal

22nd - 23rd January 2018, Dining Park Restaurant and Lounge, Kathmandu, Nepal

Asian Institute of Technology (AIT) and Alternative Energy Promotion Centre (AEPC, Nepal) jointly organized a two-day stakeholder consultation workshop on 'Promotion of Sustainable Use of Biomass Briquettes in Nepal' from 22 to 23 January 2018 in Kathmandu, Nepal.

The workshop was funded by the Climate Technology Center and Network (CTCN) and supported by Ministry of Population and Environment (MoPE). 25 participants from various organizations (private enterprises, World Bank, AEPC, AIT) attended the workshop.

Dr. Abdul Salam and Dr. Shobhakar Dhakal (Principal Investigators of the project) presented an overview of the globally available technologies and business models for biomass densification, along with policy incentives present in different countries. The findings were discussed with the participants to get their feedback on prevailing issues and challenges in upscaling their industries and creating a stable market in the context of Nepal.

Day 1 discussion focused on demand creation and market segmentation, quality assurance of densified biomass, diversification of raw materials, charring technologies, end

user technologies and SWOT analysis of the business model.

Day 2 discussions were aimed at the policy framework for bio briquettes and emphasized on special protection for the industry, risk minimization strategies, tax exemption/holiday, institutional development and technology financing.

The findings of the workshop will be used to develop a business model and policy framework for sustainable use of bio briquettes in Nepal, and disseminated to relevant policy makers at a later workshop.

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Organic Waste Recycling: Technology, Management and Sustainability – 4th edition

“The popularity of the book is attested by the fact that after its first edition in 1989, it is now under its fourth edition,”

Dr. Thammarat Koottatep

A New Book on Organic Waste Recycling

A new revised edition of a book on “Organic Waste Recycling” authored by AIT experts, Prof. Chongrak Polprasert and Dr. Thammarat Koottatep of Environmental Engineering and Management (EEM), School of Environment, Resources and Development (SERD) has been released. Incorporating additional chapters on governance and wetlands, the book brings in current Sustainable Development concepts into the practical realm in light of the Sustainable Development Goals (SDGs).

Presenting the latest edition to the AIT Library, Prof. Chongrak stated that the fourth edition of this widely popular book, which is used in both undergraduate and graduate studies for students majoring in environmental sciences and

engineering now includes latest developments in the field.

According to Dr. Thammarat, new additions include a chapter on constructed wetlands for wastewater and faecal sludge stabilization, as well as governance. New sections that have been incorporated are waste recycling versus. Climate change and water; faecal sludge and its characteristics; hydrothermal carbonization technology; up-to-date environmental criteria and

legislation and environmental risk assessment. Case studies with emphasis on practices in both developed and developing countries have been included, along with more exercises at the end of chapters to help the readers understand the technical principles and their respective applications. “The popularity of the book is attested by the fact that after its first edition in 1989, it is now under its fourth edition,” says Dr. Thammarat.

[Read more @ AIT website](#)



Authors of the Book Organic Waste Recycling, Dr. Thammarat Koottatep (left) and Prof Chongrak Polprasert (right) presenting the book to the AIT library.

Ms. Raja Nivedha, a PhD Student Presented a Paper at the EPSCICON 2018

6th - 10th January 2018, Vidya Academy of Science and Technology, Thrissur, Kerala, India

Ms. Raja Nivedha R, a PhD student presented a paper on “*PSO based Economic Dispatch of a Hybrid Microgrid system*” at the EPSCICON 2018, the 4th International Conference on Power Signals, Control & Com-

putations at Vidya Academy of Science and Technology.

Abstract
Microgrid is becoming very popular by addition of renewable generation for producing and

supplying adequate power in remote areas. The focus is to design cost-effective hybrid microgrid system with renewable source such as wind combined hydrogen based storage system...

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Dr. Oleg attended the 3rd International Forum on Sustainability in Asia

23rd - 24th January 2018, Kuala Lumpur, Malaysia

Dr. Oleg Shipin and the Regional Resource Centre for Asia and the Pacific (RRCAP) team jointly presented a review of “Africa and Asia: Exchange on Science-based observation for monitoring, mitigation and adaptation”.

strategic developments in the field of Climate Change in Central Africa in the light of South East Asian developments were discussed.

Technical Research-based Assistance for development of the national Low Carbon strategy, Technology Needs Assessment and Climate

Finance in Central African Republic feature many parallels with other global regions. Synergies with South East Asia and Southern Africa are thought to be also mutually enhancing for setting up watch observatory for health and environmental risks in the Basin of the Congo river, particularly in the Republic of Congo (Brazzaville).

His recent South-to-South contributions to science-based

Prof. Chettiyappan Visvanathan delivered series of Lectures in Japan

24th - 26th January 2018, Tokyo, Japan

Prof. Chettiyappan Visvanathan was invited as a Guest Speaker by the Japan Water Research Centre (JWRC) at the JWRC Seminar in Tokyo, Japan from 24-26 January 2018.

The seminar saw participation from more than 80 water professional from the industry sector. During the visit, Prof. Visu discussed possible research collaboration for 2018 and 2019 with the President of JWRC, Prof. Ohgaki. JWRC also organized a specialized technical visit to Kawai Water Treatment Plant in Yokohama city, one of the world’s biggest membrane based water treatment plant. Prof. Visu was

also invited by the University of Tokyo, to deliver a lecture on “Water Quality and Security in Asian Context: What 3R and Circular Economy can do”.



Prof. Visu @ Kawai Water Treatment Plant in Yokohama

The invitation was part of the ongoing AIT- JWRC collaboration project on NewTap project. Prof. Visu delivered a lecture on “Role of Japanese Water Experts in Developing Asian Countries”.



Ms. Raja @ the EPSCICON



The 3rd International Forum on Sustainable Future in Asia (3rd NIES Forum)



Prof. Visu @ the JWRC Seminar



Prof. Visu @ the University of Tokyo

Special Lectures

Global Challenges: A Perspective

1100 -1200 hrs. 10th January 2018, Room No. S101, SERD Seminar Room, AIT



Prof. Deepak Sharma, Director of the Center for Energy policy (CEP) and Associate Dean (International), in the Faculty of Engineering and Information Technology at the University of Technology, Sydney (UTS), Australia delivered a special lecture on “Global Challenges: A Perspective”.

Abstract

Humanity is presently faced with several global challenges, for example, climate change, resource scarcity, income equalities, urbanization, infrastructure provision, mistrust of polity, democracy-

deficit, distributive injustice, and human-machine fusion! A satisfactory redress of these challenges will require mature public policy discourses that are informed by the intertwined and context-specific nature of these challenges, and supported by mechanisms...

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Sustainable decentralized system for recovering water from wastewater using membrane electro-bioreactor (MEBR)

1400 -1500 hrs. 15th January 2018, Room No. S101, SERD Seminar Room, AIT



Prof. Maria Elektorowicz, Department of Building, Civil and Environmental Engineering, Concordia University, Montreal, Canada delivered a special lecture on “Sustainable decentralized system for recovering water from wastewater using membrane electro-bioreactor (MEBR)”.

Abstract

Centralized wastewater treatment plants (WWTPs) consist of many operation units, while each unit is dedicated to the removal of a distinct wastewater component recognized as a pollutant of environment. Subsequently, existing wastewater treatment

facilities have a large footprint and use a significant amount of energy. On the other hand, the access to clean water declines due to the development of megacities, pollution of water resources, an excessive usage of water for food production - to mention a few factors among many.

[Read more...](#)

Closing the loop – Role of anaerobic fermentation based biorefinery utilizing waste

0830 -0930 hrs. 17th January 2018, Room No. S101, SERD Seminar Room, AIT



Dr. Anish Ghimire, Assistant Professor, Research Coordinator, Nepal Engineering College (NEC), NEC-Center for Postgraduate, Studies (CPS) (Affiliated to Pokhara University), Nepal delivered a special lecture on “Closing the loop – Role of anaerobic fermentation based biorefinery utilizing waste”.

Abstract

Many of the fuels, chemicals and raw materials that we use in our daily lives are derived from the petroleum based refineries. Depleting fossil fuel reserves and the consequences such as greenhouse gas emission and pollution problems from the by-products of the fossil fuels use are driving biobased economy

for the production of bioenergy and useful chemicals. Moreover, biorefineries for the production of multiple fuels and products can overcome the economic hurdles. Anaerobic fermentation (AF) technologies such as dark fermentation, photo fermentation and anaerobic digestion can play.....

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Characteristics of Seawater Driven Forward Osmosis for Recovering Nutrients in Municipal Wastewater and Their Implications in Sustainable Water Solution.

1030 -1130 hrs. 10th January 2018, Room No. S101, SERD Seminar Room, AIT



Dr. Wenchao Xue, Research Specialist at Department of EECC, SERD, AIT delivered a special lecture on “Characteristics of Seawater Driven Forward Osmosis for Recovering Nutrients in Municipal Wastewater and Their Implications in Sustainable Water Solution”.

Abstract

The worldwide water, resources and energy related development problems are calling for sustainable solutions utilizing sound theories and practices of water and wastewater engineering. Improvement of water quality and the effective

implementation of water-use efficiency are recognized as instruments towards achieving the sustainable development goals. It is recognized as well that water issues are closely linked with other important global challenges, including climate change, renewable energy...

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Doctoral Student Seminar

Farmers’ perception of climate change: Association with climate trends and factors influencing perception

1530 -1430 hrs. 31st January 2018, Room No. S101, SERD Seminar Room, AIT



Mr. Muhammad Imran Lodhi, a doctoral student of Climate Change and Sustainable Development Program, Department of EECC, SERD, delivered a doctoral seminar on “Farmers’ perception of

climate change: Association with climate trends and factors influencing perception”

Abstract

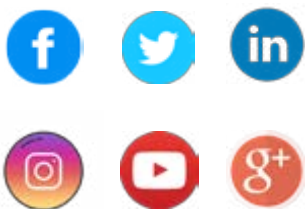
Climate change is adding

to the challenges of farming communities across the developing countries. To tackle this new challenge, it is important to understand how farmers perceive climate change...

[Read more...](#)



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and beyond*



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For feedback, contact
dorji@ait.asia

Orientation and Enrollment of New Students for January Semester 2018

8th January 2018, ET238, Energy Building, AIT

The Department of Energy, Environment and Climate Change under the School of Environment, Resources and Development welcomed 17 new students for the January semester 2018 from 11 countries; Thailand, Germany, India, Vietnam, Nepal, Philippines, Sri Lanka, Myanmar, Bhutan, Cambodia and Bangladesh. Of which, 3

enrolled in Doctoral degree, 11 in Master degree, and 1 each in Diploma, Special Program and Certificate Course.

The Head of the Department, Dr. Shobhakar Dhakal introduced the new students to the department faculty and staff, programs and areas of specializations in the morning session. And the orientation

program continued with a tour of the laboratory facilities in the afternoon.

The news students were introduced to AIT Campus, Research Centers, Service Centers and briefed on AIT practices and procedures, during the AIT Orientation Day on the 5 January 2018.



Scholarship Deadline for August Semester 2018

31st March 2018

We are accepting application for the August Semester 2018.

We offer numerous generous scholarships for students who can contribute to the learning experience and make a positive impact on society.

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.

For more information on the scholarships

[Read here...](#)

GSEP Scholarship Application Portal is Open

GSEP Scholarship for Full-time master's students from developing countries studying in sustainable energy development. The award is tenable at any university in the world and has a value of up to \$23,000 US per year (for up to two years).

The Global Sustainable Electricity Partnership is a non-profit organization of leading electricity companies driving sustainable energy development worldwide. One of our flagship programs is a scholarship supporting

exceptional master's students from developing countries studying in sustainable energy development.

For more information on the scholarship

[Read more...](#)

Dr. Sher Jamal Khan Awarded for His Outstanding Research

AIT Alumnus (Environmental Engineering and Management, 2008), Dr. Sher Jamal Khan was awarded the "Salimuzzaman Siddiqui Prize in Applied Science-Technology 2017 in Engineering Sciences for Scientists under 40" by the Pakistan Academy of Sciences (PAS) at a ceremony held on November 1, 2017 at PAS Secretariat, Islamabad.

This prestigious award was in recognition of his outstanding research work in the subject.

Decision of the PAS Council was duly endorsed by TWAS, The Academy of Sciences for the Developing World, Italy. The Prize carried a cash award of US\$ 1000/- and a certificate.

Dr. Sher Jamal Khan is an Associate Professor at the of Institute of Environmental Sciences and Engineering (IESE), School of Civil and Environmental Engineering (SCEE), National University of Sciences and Technology (NUST), Islamabad, Pakistan.

