



JGSEE NEWSLETTER

The Joint Graduate School of Energy and Environment

King Mongkut's University of Technology Thonburi

91 Pracha Uthit Rd., Bangmod, Tungkru, Bangkok 10140 THAILAND

Operates under 5 universities collaboration



KMUTT



KMITNB



CMU



PSU



SIIT-TU

Vol. 1 No. 3 May - June 2001

Monitoring visit by ADB team

To follow up progress of JGSEE, the Asian Development Bank (ADB) sent a mission to JGSEE on 26 April 2001.

Judging from the team report, they appeared to be satisfied with the progress made by JGSEE. However, there are a number of items that we need to catch up with the plan, for examples, the activities on visiting academics, and the procurement of equipment.



Mr. Vladimir N. Cabio

Ms. Leah Gutierrez

The team consisted of Ms. Leah Gutierrez, Project Economist and Mr. Vladimir N. Cabio, Assistant Project Analyst. They were welcomed by JGSEE administrators and briefed on progress of activities carried out during the past period. The topics of presentation and discussion included infrastructure, student intakes, staff, expenditures, procurement of equipment and publications. The visit ended at the mechanical engineering department to observe JGSEE students' research activities.



Table of Contents

Monitoring visit by ADB team.....	1
JGSEE new logo.....	2
New affiliated staff.....	2
JGSEE staff shared experience on GHG from rice fields at an international workshop in China.....	3
JGSEE to move some of activities to Bangkhuntian campus.....	4
Update on students theses.....	4
Applications for semester1/2001 entry.....	8

**JGSEE Newsletter is edited and published by
The Joint Graduate School of Energy and
Environment**

Prof. Dr. Chullapong Chullabodhi Executive Editor

Ms. Prathumthip Sawangamporn Editor

What's Going On Around JGSEE ?

JGSEE new logo

In October last year, JGSEE organized a Logo Contest, in order to find a more suitable emblem to be used in place of the existing logo. Invitations were sent to various government organizations and universities, including announcement on JGSEE Homepage. At the closing date, 54 designs were received and the decision of a judge panel, consisting of 6 JGSEE's Board members, the following designs were announced winners.

The design by Mr. Surattanachai Cheunta from Sri Pathum University, won first prize, and was followed by Mr. Pichai Euruchuthamanee from Rajabhat Institute, Thonburi, whose design received second prize. The third prize went to the design by Miss Benjapa Rupiantham from King Mongkut's Institute of Technology, Ladkrabang. We, at JGSEE, would like to thank them for their contributions and below is the design, which has been chosen to be JGSEE's official logo.



New affiliated staff

Assoc. Prof. Dr. Apichai Therdthianwong, a lecturer at Chemical Engineering Practice School, King Mongkut's University of Technology Thonburi, has joined JGSEE as affiliated faculty. He graduated with a Ph. D. from Illinois Institute of Technology, U.S.A. in chemical engineering. His principle research interests include hydrodynamics of multiphase flows, computer modeling and simulation of single and multiphase flows, separation, reactor system design, hydrogen and fuel cell technology.



JGSEE staff shared experience on GHG from rice fields at an international workshop in China

During 25 - 27 February 2001, an international workshop on GHG emissions from rice fields in Asia was held at Nanjing, The People's Republic of China. The meeting was organized jointly by the Institute for Global Environmental Strategies (IGES), the National Institute for Environmental Studies (NIES), the Material Cycling in Pedosphere, and The Institute of Soil Sciences, Chinese Academy of Sciences.

Among the 27 papers from 9 countries in Asia, together with papers from well - known world experts, presented at the workshop, there were 2 oral and 1 poster presentations from Thailand, 2 of which were from JGSEE.

At the end of the meeting, conclusion was drawn on the direction of future research, which should focus on the application of ecological model as the tool to estimate GHG emissions. Stress should not only be on a country, but also on a wider regional scale. Furthermore, besides methane, nitrous oxide, carbon dioxide and other trace gas emissions

should also be investigated. In validating the model, accurate data are required. Consequently, the build up of ecological, meteorological and soil databases is necessary. As these data are often problematic, especially in Asia, future direction should not only focus on model development, but also database acquisition and actual field data. In this regard, there is a need to strengthen co-operation between local research organizations and other investigators in the region.



The meeting objective was to prove national inventory of methane and nitrous oxide emissions from rice fields at regional and global levels. Life cycle assessment of the GHG, carbon cycle in the rice fields, controlling factors, mitigating options and their risk assessment were also the topics of discussion during the meeting.



Assoc.Prof.Dr. Sirintornthep Towprayoon and JGSEE student, Ms. Kruamas Smakghan

JGSEE to move some of the activities to Bangkhuntien campus



Activities over the last semester has increased considerably, which lead the management to look for more working space. After consultations with KMUTT, fellow senior staff, and the JGSEE's Board of Trustees, it was decided that most of the research activities should be shifted to Bangkhuntien campus.

Following this guideline, the management has contacted KMUTT to rent an area of about 2,000 m², located on the 6th floor of the School of Bioresources Technology Building. Plans are also being worked out to furnish the space in about 2 months time.

Update on students theses

At the end of semester 2/2000, there are altogether 34 Ph.D. students doing theses at JGSEE and 5 collaborative universities and institutions, with details as follow.



Energy Students

University / Institution	Student	Thesis Topics
PSU	Mr. Thanansak Theppaya	Improvement of Rubber Wood Drying Process and the Kiln Advisor : Assoc.Prof.Dr. Suteera Prasertsan
PSU	Mr. Phuttipong Saensabai	Component Matching and Operation Optimization of Heat Pump Dryer Advisor : Assoc. Prof. Dr. Suteera Prasertsan
CMU	Mr. Nattawud Dussadee	Design of Thermosyphon Heat Pipe for Reduction of Heat Accumulated in Wet Paddy Bulk Storage Advisor : Prof. Dr. Tanongkiat Kiatsiriroat
CMU	Mr. Churat Thararux	Design of a High Efficiency Rotary Drum Logan Dryer Advisor : Prof. Dr. Tanongkiat Kiatsiriroat

University / Institution	Student	Thesis Topics
KMITNB	Mrs. Woranuch Jangsawang	A Study on the Combustion of Infectious Waste in a Controlled-Air Incinerator; Optimization and Thermal Modeling of Its Operating Conditions Advisor : Asst. Prof. Dr. Somrat Kerdsuwan
JGSEE	Mr. Suwit Phethuayluk	Air Condition by Air Drying with Silica Gel as Desiccant in the South of Thailand Advisor : Prof. Dr. R. H. B. Exell
SIIT-TU	Mr. Wachara Permchart	Design and Development of a Conical Fluidized Bed Combustor for Agricultural Residues Advisor : Prof. Dr. Vladimir Kouprianov
JGSEE	Mr. Surajitr Pramuang	A Solar Collector for Regenerating Silica Gel in Desiccant Air-Conditioning Systems Advisor : Prof. Dr. R. H. B. Exell
SIIT-TU	Mrs. Pawinee Suksuntornsiri	Energy Chain Analysis Advisor : Assoc. Prof. Dr. Bundit Limmeechokechai
CMU	Mr. Wathana Limpananwadi	Impacts of Electric Embedded Generation on Distribution System Advisor : Asst. Prof. Dr. Worawit Tayati
JGSEE	Mr. Joseph Lancaster	The Measurement of Demand for Photovoltaic (PV) Energy in the Residential Sectors in Thailand Advisor : Prof. Dr. R.H.B Exell

Environment Students

University / Institution	Student	Thesis Topics
KMUTT	Ms. Sureeporn Kerdkankaew	Annual CO ₂ Uptake in Two Tropical Tree Species : Azadirachta Indica A. Juss Var Siamensis (valuation) and Pterocarpus Macrocarpus Advisor : Assoc. Prof. Dr. Pojanee Khummongkol
KMUTT	Ms. Arpa Wangkiat	Source-Receptor Modeling of Particulate Matter in the Mae-Moh Area Advisor : Dr. Narumon Withers Harvey

University / Institution	Student	Thesis Topics
KMUTT	Mrs. Valairat Chantawong	The Applications of Clay Minerals for Wastewater Treatment Advisor : Dr. Narumon Withers Harvey
KMUTT	Ms. Benjaporn Surarak	Role of Upflow Feed Velocity on Microbiological and Mass Transfer Aspects Advisor : Prof. Dr. Morakot Tanticharoen
KMUTT	Ms. Sansanee Chawanakul	Methanogens Community and Methane Emission in Rice Field in Thailand Advisor : Prof. Dr. Morakot Tanticharoen
SIIT-TU	Ms. Pantip Klomjek	Assessment of Nutrient Removal from Municipal Wastewater in Constructed Wetland Under Tropical Climate Advisor : Asst. Prof. Dr. Suwanchai Nitisoravut
JGSEE	Mr. Vasin Mahatnirunkul	Bioremediation of Hydrocarbon in Tank Farm Contamination Advisor : Assoc. Prof. Dr. Sirintornthep Towprayoon
JGSEE	Ms. Thoucha Rammasak	Biogeochemical Cycle of Sulfur in Mangrove Sediment and Its Potential Change due to Sea Level Rise Resulting from Climate Change Scenarios Advisor : Assoc. Prof. Dr. Sirintornthep Towprayoon
JGSEE	Ms. Nam-Oy Kiatwongthong	Effects of NO _x Emission on Acid Deposition in Bangkok / Effects of NO _x Emissions to Greenhouse and Acidity in Bangkok, Thailand Advisor : Prof. Dr. V. N. Bashkin
JGSEE	Ms. Ratchadawan Nimnual	VOC _s Control Techniques for the Printing Industries Advisor : Assoc. Prof. Dr. Sirintornthep Towprayoon
JGSEE	Mr. Prapat Krangpanich	Assessment of Biogeochemical Cycle of Heavy Metals in the Impact Area of Mae-Moh Power Plant/ The Impact of Heavy Metals from Lignite Power Plant Emission on Human Health and Ecosystem in the North of Thailand Advisor : Prof. Dr. V.N. Bashkin
KMUTT	Mrs. Suchapa Netpradit	Removal of Colour from Synthetic Reactive Dye Solution By Using Metal Sludge Advisor : Asst. Prof. Dr. Paitip Thiravetyan

University / Institution	Student	Thesis Topics
JGSEE	Mrs. Bunjarat Rasisit	Evaluation of the Performance of Semi-continuous Feed Reactors of Market Waste Composing Advisor : Assoc. Prof. Dr. Sirintornthep Towprayoon
JGSEE	Ms. Watita Ariyaphanpitak	Effects of Ozone on Productivity of Selection of Thai Economic Crops Advisor : Prof. Dr. V.N. Bashkin
KMUTT	Ms. Chantip Kumnuanthip	Investigations into the Properties of Reclaimed Rubber Tyres Blended with Different Grades of Natural Rubber Advisor : Asst. Prof.Dr. Narongrit Sombatsompop
JGSEE	Mr. Suparb Paramee	Estimation of Regional Biogeochemical Fluxes of Nitrogen in the Chao Phraya River Basin Advisor : Prof.Dr. V.N. Bashkin
JGSEE	Ms. Charoensri Keprasertsup	Environmental Risk Assessment of Unleaded Gasoline Additives in Bangkok Advisor : Prof. Dr. V.N. Bashkin
KMUTT	Mr. Nirut Koonpol	Appropriate Technology for the Defluoridation of Drinking Water Advisor : Assoc. Prof. Naraporn Hanvajanawong
KMUTT	Ms. Charuwan Kasemsup	The Combined Effect of Potential Matter and Oxygen Supply on Volatile Fatty Acid Uptake for Polyhydroxyalkanoate Synthesis by Activated Sludge from Enhanced Biological Processes Removal Processes Advisor : Asst. Prof. Dr. Chalermraj Wantawin
KMUTT	Mr. Narong Thonchaya	Air Pollution Model Cover Bangkok City Advisor : Assoc.Prof.Dr. Prungchun Wongwiset
JGSEE	Mr.Apichatchai Boonlue	Economic Analysis of Transboundaries Air Pollution in South-East Asia Advisor : Prof. Dr. V.N. Bashkin
KMUTT	Mr. Nitinai Khummalai	The Suppression of Bacterial Oxidation of Arsenopyrite by Coating Advisor : Assoc.Prof.Dr. Virote Boonamnuayvittaya
KMUTT	Mr. Chaiyan Chaiya	The Characterisation and Application of Adsorbent from Coffee Residues for CO _x and NO _x Adsorption Advisor : Assoc.Prof.Dr. Virote Boonamnuayvittaya

Applications for semester 1/2001 entry

In the coming semester of 1/2001, there are 44 applicants who apply to study at JGSEE. Out of these, 30 are Master degree applicants, and 14 apply for Ph. D. course. Below is the detailed summary.

Master degree



Doctorate degree



<i>Thai applicants</i>	Energy	16
	Environment	9
<i>Foreign applicants</i>	Energy	4
	Environment	1
Total		30

<i>Thai applicants</i>	Energy	5
	Environment	8
<i>Foreign applicants</i>	Energy	1
Total		14
Grand total		44



JGSEE Newsletter is edited and published by
The Joint Graduate School of Energy and Environment

King Mongkut's University of Technology Thonburi

91 Pracha Uthit Rd., Bangmod, Tungkru, Bangkok 10140 THAILAND

Tel : 4708309-10, 8729014-15 Fax : 4279634, 8726736 E-mail : jgsee@jgsee.kmutt.ac.th

[Http://www.jgsee.kmutt.ac.th](http://www.jgsee.kmutt.ac.th)

Postage here