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UNIVERSITY CONSORTIUM

A quarterly newsletter for the Southeast Asian University Consortium for Graduate Education in Agriculture and Natural Resources

UQ study shows governments need more honest environmental accounting

Research at the University of Queensland (UQ) in Australia is paving the way for better management of the natural environment.

Researchers from UQ's Ecology Centre and collaborators published in Science their findings that it is only with honest reporting of both the positive and negative outcomes of conservation policy can there be hope of properly managing dwindling environmental resources.

Dr. Eve McDonald-Madden, a postdoctoral researcher at the UQ Centre for Applied Environmental Decision Analysis and the study's lead author, said without rigorous and transparent accounting, it is impossible to manage the environment.

"Given the increasing public awareness of conservation issues and the need for ongoing investment in environmental management, it is worrying that little attention has been given to deriving rigorous metrics for reporting on conservation investments," Dr. McDonald-Madden said.

Reporting both gains and losses is a basic requirement of "honest" conservation accounting. The current global standard of reporting gains but not losses is unjustified and potentially misleading.

Professor Hugh Possingham, Director of an Australian government-funded Commonwealth environmental research facility on environmental decision-making and co-author of the study, said the field of biodiversity conservation is hampered by weak performance measurement.

"In the corporate world such weak reporting would be considered bad practice," Professor Possingham said.

The researchers used a case study of land clearing in Queensland from 1997 to 2003 and found that with traditional reporting methods, the conservation gains would appear to be small but positive.

When metrics are used that account for both loss and reservation, they tell a markedly different story," Professor Possingham said.

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UPLB student awarded travel grant to UBC

Mr. Artemio A. Martin, Jr., who is pursuing his Straight PhD in Soil Science at the University of the Philippines Los Baños (UPLB), has been awarded a travel grant to University of British Columbia (UBC) as exchange student under the University Consortium Student Exchange Program effective 1 January-30 April 2009.

The UBC Go Global Scholarship and the University Consortium Pool of Funds support Mr. Martin's student exchange grant.

During his stay at UBC, Mr. Martin is enrolled in three graduate courses offered at the Faculty of Land and Food Systems.

Mr. Martin is Instructor 1 at Isabela State University in the Philippines. He is pursuing his

MARTIN

Straight PhD program at UPLB under scholarship from the Southeast Asian Regional Center for Graduate Study and Research in Agriculture (SEARCA).

The exchange grant given to Mr. Martin to UBC brings to 62 the total number of student exchange grants awarded under the University Consortium. (LLDDomingo)

UQ Gatton makes New Year research resolutions

The University of Queensland's Gatton campus is already looking forward to a productive 2009 after recently hosting the 21st South East Asian Regional Centre for Agriculture University Consortium (SEARCA-UC).

Representatives from Indonesia, Philippines, Malaysia, Japan and Canada attended the two-day event to discuss plans for collaboration between the partner universities for the New Year.

The consortium was established in 1989 and facilitates regular staff and student exchanges between the institutions, builds capacity in agriculture and environment programs at leading South East Asian universities and enriches the international experience within the Faculty of Natural Resources and Veterinary Science.

UQ Professor Richard Williams said the partnerships between the universities opened doors for exciting new projects.

"The demand for animal protein is growing rapidly across South East Asia resulting in a lot of interest in collaboration with researchers in the recently opened Centre for Advanced Animal Science at Gatton," Professor Williams said.

"Another benefit of the consortium is the support for student exchanges which provides opportunities for our students to undertake as part of their study or to gain work experience in South East Asia.

"It brings international students to Gatton, enriching the cultural diversity on campus."

WILLIAMS

The current priority for the consortium is food security, with plans in place to create an international workshop next year as part of a leadership building program. (Source: *UQ News Online*, http://www.uq.edu.au/news/index.html?article=17133)

UQ study, from p. 1

1997 to 2003 and found that with traditional reporting methods, the conservation gains would appear to be small but positive.

When metrics are used that account for both loss and reservation, they tell a markedly different story," Professor Possingham said.

They reveal that overall in that period Queensland lost habitats far faster than they were being conserved. Hopefully changes to land clearing laws and a government commitment to expanding the reserve system will show better performance in the next period.

Dr. McDonald-Madden said honest metrics of conservation achievements are essential to inform conservation shareholders—that is, the public—about the performance of their investments.

"In failing to mention the losses and opportunity costs of conservation investments, agencies reporting

McDONALD-MADDEN

on conservation achievements are disclosing revenue rather than net profit, and are being economical with the truth," Dr. McDonald-Madden said.

An auditor from the financial sector would be appalled. Governments around Australia, and all over the world, need to get their environmental accounts cleaned up. (Source: UQ Online News, 1 January 2009 at http://www.uq.edu.au/news/index.html?article=17144)

SEARCA Offers MS, PhD Scholarships in Agriculture

Applicants must apply through their respective country's Ministries of Education/Higher Education, Agriculture, Forestry, Fisheries, Environment and Natural Resources, or Rural Development, which will endorse and submit their application to SEARCA not later than 30 July 2009. SEARCA scholars may study at UC member universities in Southeast Asia. Original application documents must still be sent to their Ministry for endorsement and submission to SEARCA. For more information, visit www.searca.org or send email to gsd@agri.searca.org.

UPM, solution engineering firm pilot bio-based vegetable oil production

Universiti Putra Malaysia (UPM) has entered into collaboration with Solution Engineering Holdings Bhd. (SEH) in designing and producing a pilot plant in Puchong, Malaysia worth RM4 million (US$1.1 million) that can produce bio-based vegetable oil.

According to SEH Managing Director, Barry Lim, the construction is scheduled beginning the first quarter of the year at the company's headquarters and expected to be running in the market by 2010.

"The completed pilot plant will accommodate production up to 700 ton metrics every year," Mr. Lim added.

The target is for the product to penetrate the markets in Europe, Korea, Japan and in the U.S as these countries have shown a higher demand of bio-based oil which is used in the mixture process of environmental friendly bio polymer oil.

"The raw material used during the process is normally biodiesel from raw palm oil. Vegetable oil and other raw material from plants such as Jatropha is also usable," Mr. Lim said.

He said Jatropha is a tropical plant that is internationally recognized due to its potential as biodiesel fuel.

Dr. Robiah Yunus conducting experiment with fellow researchers at her laboratory. *(Photo courtesy of UPM)*

A researcher from the Chemical Engineering and Environmental Department , Faculty of Engineering, UPM, Assoc. Prof. Dr. Robiah Yunus, leads other researchers in developing the technology process of the pilot plant.

Mr. Lim said UPM has received Technofund grant worth RM4.55 million (US$1.3 million) from the Ministry of Science, Technology and Innovation on 7 October 2007. He added that the collaborative project between UPM and SEH is an initial project geared towards research and commercialization. He also mentioned that 30 percent of the endowment would be utilized for purchasing testing and analysis equipment, research and design fees, marketing, and product certification as well as raw materials.

SEH possesses expertise in designing and developing engineering instruction equipment such as chemical, electrical and mechanical engineering as well as controller. (Source: Media Section, Corporate Communication Division, UPM, http://www.upm.edu.my/ ?l=e&kat=1&aktvt=berita&kod=2009030306213082517216541 16)

UGM calls, from p. 4

Kyoto University, Japan; University of Indonesia, Indonesia; University of North Sumatra, Indonesia; and Hasanuddin University, Indonesia. The conference targets graduate students currently conducting research on contemporary issues of Indonesia. Papers may be on any of the various aspects of people's lives related to the conference theme, including topics on history, philosophy, law/legal aspect, social dimension, culture, language, literature, religion/beliefs, environment, politics, democracy/ human rights, education, economics, management, agriculture, health, international relations, media studies, arts, and gender issues, among others.

The deadline of submission of abstracts (350 words) is 29 February 2009, while the deadline of submission of full papers (6,000 words) is 30 October 2009.

Panels will later be organized according to themes/issues of abstracts/ papers received from students.

UGM welcomes any proposal to organize panel on a particular theme with its panel coordinators composed of scholars, a number of students' abstracts under the same theme, and discussants for each session in the panel. The Steering Committee will review both the individual abstracts and the proposed panels. The best papers will be selected from each panel and considered for publication.

Abstracts and inquiries may be sent to the Organizing Committee: Andy Wahyu Widayat: igsc.indo1@gmail; and Siti N. Hidayah, M. Endy Saputro and Esti Anantasari: figcindonesia@gmail.com. Other information and the form for abstracts may be downloaded from http://www.api.pasca.ugm.ac.id. (LLDDomingo, with report from UGM)

UGM calls papers for 1st Int'l Grad Student Confab on Indonesia

Universitas Gadjah Mada (UGM) is inviting papers for the "First International Graduate Student Conference on Indonesia" to be held on 1-4 December 2009.

To be conducted bilingually, the conference will be on the theme "(Re)Considering Contemporary Indonesia: Striving for Democracy, Sustainability, and Prosperity, A Multidisciplinary Perspective."

Organized by the Universitas Gadjah Mada (UGM) is inviting papers for the "First International Graduate Student Conference on Indonesia" to be held on 1-4 December 2009.

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Organized by the UGM Graduate School and the Academy of Professorship Indonesia in Social Sciences and Humanities (KNAW-AIPI), the conference will be held in commemoration of the 60th anniversary of UGM.Moreover, collaborators for the conference include University of Sydney, Australia; Asia Research Institute, National University of Singapore, Singapore; Department of Anthropology, Religion and Culture, Boston University, USA; Center of Southeast Asia Studies, Jackson School, University of Washington, USA; Sociology and Anthropology of Contemporary Indonesia, Leiden University, The Netherlands; Utrecht University, The Netherlands; Center for Southeast Asian Studies,

See UGM calls, p. 3

Improving agricultural productivity while conserving biodiversity

Professors from the University of British Columbia (UBC), Canada and Stanford University, USA have recently published the world's first planning framework that calculates the production and conservation benefits of investments in farmland. They are Dr. Kai Chan, Assistant Professor at Institute for Resources, Environment and Sustainability, UBC and Dr. Gretchen Daily, Professor, Department of Biological Sciences, Stanford University.

CHAN

The framework identifies how the components of a landscape, such as a field and vegetation types, contribute to individual species. It then analyzes the species' survival chances based on its need for habitat types and the distribution of habitats across the landscape. Then it predicts how changes in habitat will affect individual species and the total richness of species.

A Canada Research Chair in Biodiversity in Ecosystems Services, Dr. Chan said biodiversity is a tremendous store of natural capital and we have moral duties to protect it.

Dr. Chan has recently tested the framework to create a business case for farmers of Costa Rica to invest in a series of windbreaks that are protecting bird habitats and improving agricultural productivity.

Biodiversity in Costa Rica, as in many places in Latin America, has been ravaged by logging and agriculture industries.

Dr. Chan and his colleagues used the framework to identify windbreaks as way to improve productivity of cattle and crops and to help protect 17 species of birds, including many that migrate from the U.S. and Canada.

According to Dr. Chan, cattle, bananas and coffee were under stress from high winds and underperforming, so there was a clear economic argument for investing in wind barriers. He and his colleagues investigated how different wind barriers would impact biodiversity. They determined that by planting a mix of native trees, shrubs and other plants they could not only shelter the farm from wind for less than the cost of a wood fence, but also provide an important habitat for these birds.

The results of his work with farmers were recently published in the journal Proceedings of the National Academy of Sciences.

Dr. Chan said most people do not realize that small, targeted changes to farms can have a positive impact on biodiversity without affecting their bottom line. He said the people who structure farm payment schemes and subsidy policies are in dire need of tools to help them make those complex decisions. (LLDD, with report from UBC Reports, Vol. 55, No. 2)

KU, CIRAD co-organizes Hevea Research Platform in Partnership

Kasetsart University and the Agricultural Research Centre for Development (CIRAD) jointly organized the First Annual Seminar of the Hevea Research Platform in Partnership (HRPP) with the strong support of the French Embassy held in Bangkok, Thailand on 27-28 January 2009.

The emphasis of the initiative is on strengthening excellence of the rubber commodity as well as academic networks and regional cooperation through the knowledge sharing and technology transfer of rubber research and development results.

The core institutions jointly working on this platform are KU; Prince of Songkla University, Thailand; Department of Agriculture, Thailand; and CIRAD. These four core partners officially signed the Memorandum of Understanding on Creating the HRPP in Thailand on 26 May 2008.

Participants of the Hevea Research Platform in Partnership held at KU on 27-28 January 2009. *(Photo courtesy of Kasetsart University)*

Convened at the Miracle Grand Convention Hotel in Bangkok, the seminar tackled cutting-edge scientific development in rubber among regions through the first initiative cooperation between experts, researchers, and scientists from Thailand and France.

At the opening ceremony, Associate Professor Dr. Sornprach Thanisawanyangkura, President of the HRPP, presided over the function and gave a welcome address.

The French Embassy in Thailand was represented by Dr. Abdo Malac, Attache for Scientific and Higher Education Cooperation.

The HRPP was initiated by the researchers of the Rubber Research Project under the Thai-French Research Framework, which was sponsored by Thai Commission on Higher Education and the Government of France through its Embassy in Thailand.

The MOU outlines the project details as well as capacity building plans for education and training in the rubber research platform.

In October 2008, the first meeting of the Steering Committee for the HRPP was convened at KU. Representatives of each core member of HRPP participated in the first meeting, which was presided by Dr. Abdo Malac as temporary chairman. Assoc. Prof. Dr. Sornprach Thanisawanyangkura was elected as the President of HRPP and shall serve for a two-year term. (Source: KU News, http://www.intaff.ku.ac.th/Admin/En/view_news.php?No=227)

UPLB marks its 100th year

UPLB commemorated its 100 years of existence in a week-long celebration on 2-8 March 2009.

On 6 March 1909, the UP Board of Regents approved the establishment of the UP College of Agriculture (UPCA), one of the first two units of UP.

Classes started on 14 June 1909 and held at the houses of American faculty members in the town and two borrowed tents from the then Bureau of Education.

In October 1909, the first all-purpose UPCA building was completed. After a year, a formal four-year curriculum was instituted.

From these humble beginnings evolved other degree-granting units, namely: College of Forestry and Natural Resources (1916), the College of Arts and Sciences (1972), the College of Economics and Management (1975), College of Engineering and Agro-Industrial Technology (1976), the College of Human Ecology (1983), School of Environmental Sciences and Management (1977), College of Public Affairs (1997), College of Development Communication (1998), and Graduate School (1950).

These are the other main units which now comprise the University of the Philippines Los Baños (UPLB), the first autonomous campus of the UP System.

The UPLB Centennial celebration was an affirmation that the University has come a long way since its establishment a century ago and a reminder for its constituents to carry on building a tradition of distinctive excellence founded upon an indelible legacy and a glorious past.

University of Göttingen co-organizes summer school in climate change, biodiversity

Georg-August University of Göttingen co-organized the German Alumni Summer School on the theme "Impact of Climate Change on Biodiversity – Does Nature Conservation Need New Strategies?" held on 9-16 March 2009 in Manado, North Sulawesi, Indonesia.

Co-organizers of the Summer School were the Centre for Nature Conservation and the South East Asian German Alumni Network (SEAG) for Biodiversity Conservation and Sustainable Use (BIODICS).

The German Alumni Summer School encompasses significant contributions from participants from Germany, Australia, Indonesia, Malaysia, India, and the Philippines with the main concern on climate change and biodiversity. In addition, several key lecturers and experts were invited to give presentations at the summer school.

Climate change and its impact on biodiversity have become critical issues in recent time. Several studies have documented the correlation between deforestation, species loss and climate change. The climate is changing rapidly due to human activities, especially burning of fossil fuels and enormous carbon dioxide output.

One of the serious efforts to minimize or mitigate the emission of carbon dioxide is to generate and use bioenergy. As the demand of this alternative energy is rapidly increasing, the large area of rainforest is opened and altered to palm oil plantation and other potential plantation to supply the raw materials for biofuel. This can adversely accelerate climate change and biodiversity loss. A paradox concerning bioenergy and carbon stocks has emerged, particularly in tropical countries. Hence, there is an urgent need to discuss the impact of climate change on biodiversity and find solutions to mitigate climate change.

The Summer School tackled the following topics: 1) global climate change as the challenge for the future; 2) how climate change affects biodiversity; 3) social equilibrium in bioenergy consumption; 4) the role of biodiversity to mitigate climate change; 5) the implications of climate change, renewable energy, and biodiversity for nature conservation; 6) climate change and tropical rainforest; 7) the impacts of climate change on marine biodiversity; 8) effects of climate change on agriculture and food supply; 9) biodiversity management as important means to reduce climate change; 10) climate change and forest fire; and 11) food crises and renewable energy resources.

Funded by the German Academic Exchange Service (DAAD), the Summer School was participated in by scientists and practitioners who are German alumni from Southeast Asia. (Source: Göttingen - Kassel - Marburg Alumni Network, http://www.alumni-network.de/?c=156)

Several studies have documented the correlation between deforestation, species loss, and climate change. *(Photo courtesy of How Stuff Works)*

The University Consortium

The Southeast Asian University Consortium for Graduate Education in Agriculture and Natural Resources is a program launched on 19 September 1989 by SEARCA.

The idea of having such a program was formed in August 1988 when SEARCA, with convened a meeting of deans of five leading agricultural graduate schools in the region. The deans noted a rising demand for graduate education across all agricultural disciplines and related fields, strong agricultural and demographic pressures, and tremendous growth in education, and agreed to the idea of establishing a University Consortium.

The objectives of the Consortium are:

1. To provide highly trained personnel in agriculture and natural resources for national development of Southeast Asian countries.

2. To promote mutually beneficial cooperation among agricultural universities in the region.

3. To utilize more fully and efficiently the scarce resources and expertise available in each country in the region for top-quality graduate education and research.

4. To stimulate freer sharing and exchange of information, facilities, and expertise among agricultural universities in the region.

SEARCA has served as the Consortium's Secretariat since 1989. Its founding members are Universitas Gadjah Mada (UGM) and Institut Pertanian Bogor (IPB), both in Indonesia; Universiti Putra Malaysia (UPM) in Malaysia; University of the Philippines Los Baños (UPLB) in the Philippines; and Kasetsart University (KU) in Thailand. Four associate members have been admitted, namely: University of British Columbia (UBC) in Canada, University of Queensland (UQ) in Australia, Georg-August University of Göttingen in Germany, and Tokyo University of Agriculture in Japan.

"To be a leader in implementing collaborative strategies for excellent graduate education and cutting-edge research in agriculture, environment, and natural resources for the benefit of Southeast Asia" - this is the vision of the revitalized University Consortium.

The Consortium has five components, namely: faculty visits, research fellowships, professorial chairs, and thesis grants.

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UPM Invents Software Sytem For Paddy Planters

A group from Universiti Putra Malaysia (UPM) Persistence Farming Engineering Research and Development (PREFERD) invented the Spatial Decision Supporting System (SDSS) software called 'Paddy-GIS', the tool needed for paddy persistence farming.

The research is led by Head of Bio-information Technology, Biology and Agricultural Engineering Department, Assoc. Prof. Dr. Abdul Rashid Mohamed Shariff. He said the SDSS system would assist paddy planters as well as farm managers in handling paddy fields using computer technology.

According to Dr. Abdul, "by operating this system, the planters and managers will be able to deal with the soil plot in terms of irrigation by accommodating suitable fertilizer, pesticide, and work schedule. The technology is being used by eight paddy planters in Tanjong Karang who were selected to pilot the use of the invention. Seventy percent of the consumers said it is easy to use for cultivation activities.

He added that the system was developed using Visual Basic Application and Microsoft Access which served as the Data Base Management System (DBMS) that recorded cultivation activities.

Assoc. Prof. Dr. Abdul Rashid Mohamed Shariff (2nd from left) sharing victory with his research group as Dr. Mohd. Amin Mohd. Soom (2nd from right), Nik Norasma Che'Ya and Ebrahim Jahanshiri look on. *(Photo courtesy of UPM)*

Dr. Abdul explained that "ArcGIS software was reinvented using Visual Basic Application (VBA) to help the consumers in producing scatter map of paddy plantation fertilizer. The fertilizer application map produced will act as the information centre for the planters, the managers as well as those decision makers who are involved in the paddy plantation industry."

He said the system is user-friendly, and the planters would quickly master the system, which would be upgraded in the future. He added that the data of the system enabled the planters and managers to reduce the burden of operational tasks as well as lessen the time and effort to achieve working target by learning computer technology.

Assoc. Prof. Dr. Abdul Rashid Mohamed Shariff (2nd from left) sharing victory with his research group as Dr. Mohd. Amin Mohd. Soom (2nd from right), Nik Norasma Che'Ya and Ebrahim Jahanshiri look on. *(Photo courtesy of UPM)*

It is Dr. Abdul's hope that the Ministry of Agriculture and Basic Farmers Industry will offer some incentives for the planters, farmers and related societies to purchase the technology as well as support from the researchers group in term of training. He said Malaysia looks forward to modernization efforts in agriculture and reaching the same standard as in Japan and the United States of America by maximizing the use of soil and reaping maximum yield in the long term.

This novel approach earned Dr. Abdul the Diamond Award during the British Invention Show (BIS) in London for the only invention related to environmental issues that applied GIS system as the controller in supervising the use of fertilizer.

The project developed opportunities for collaboration with government agencies that include Remote Sensing Agency, Department of Agriculture, Barat Laut Selangor Integrated Agricultural Development Area, Division of Agricultural Drainage and Irrigation, Drainage and Irrigation Department and Malaysia Agricultural Research and Development Institute. (Media and Publicity Section, Corporate Communication Division, UPM)