

## UC convenes its 35th Executive Board Meeting in Malang, Indonesia



Delegates of the 35th UC Executive Board Meeting.

### INSIDE THIS ISSUE:

- 1 UC convenes its 35th Executive Board Meeting in Malang, Indonesia
  - 2 UC returns with the 6th Summer School after the pandemic
  - 3 CLSU organizes the 4th UC Faculty Forum
  - 4 Revolutionizing Agriculture: The Future of Farming with UPM's Dr. Siti Khairunniza Bejo
  - 5 UPLB faculty members visit UC member institutions
- Clinical psychology expert talks about mental health with SEARCA scholars

The Southeast Asian University Consortium for Graduate Education in Agriculture and Natural Resources (UC) conducted its 35th Executive Board Meeting on 25-26 November 2022, hosted by Universitas Brawijaya (UB) in Malang, Indonesia. UB hosted the meeting back-to-back with this year's 6th UC Summer School. The hybrid meeting was attended by representatives from Institut Pertanian Bogor (IPB), Universitas Gadjah Mada (UGM), Kasetsart University (KU), Universiti Putra Malaysia (UPM), University of the Philippines Los Baños (UPLB), Tokyo University of Agriculture (Tokyo NODAI), National Taiwan University (NTU), Maejo University (MJU), Visayas State University (VSU), and Central Luzon State University (CLSU). The Southeast Asian Regional Center for Graduate Study and Research in Agriculture (SEARCA) attended the meeting as the Secretariat of the UC.

During the meeting, the members proposed new activities and grants for 2023, including the Young Researcher Grant and the Postdoctoral Research Fellowship Program. The Young Researcher Grant will serve as a start-up fund for new researchers of UC member institutions. The Postdoctoral Research Fellowship Program provides for the faculty members of the UC who are recent PhD graduates to conduct multidisciplinary and intersectoral research in agriculture and rural development, natural resources, forestry, and environmental science in another UC member institution. These two grants will join the regular offerings of the UC for the constituents of its member universities.

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The 35th UC Executive Board Meeting was conducted in hybrid mode and was the first face-to-face meeting for the delegates after the onset of the pandemic. Tokyo-NODAI attended the meeting virtually due to pandemic restrictions that are still in place.

The Board approved in principle the proposed Sustainability Transition Schools for simultaneous implementation in Africa, Southeast Asia and Europe but focusing on a common sustainability challenge. These Schools are expected to create opportunities for knowledge co-creation among students, promote transdisciplinary action on sustainability challenges; strengthen collaborative capacities of researchers and other stakeholders in co-creative approaches, establish a global network of sustainability agents, and assess common sustainability challenges that would enable a global conversation on sustainability and transformation pathways. The first School is scheduled tentatively in July 2024.

The UC Executive Board explored a partnership with Winrock International, a non-profit organization that provides solutions to social, agricultural, and environmental issues through a combination of technical expertise and entrepreneurial innovation. The collaboration will look into possible joint activities in climate-smart innovations in the region. The meeting also saw the initial application of three Philippine universities that vied for membership. These universities virtually presented their programs for consideration to the consortium.

The UC Executive Board likewise planned for the 2023-2025 annual activities to give host universities more time to design their conduct. For 2023, the Summer School will be hosted by KU, while the Graduate Forum shall be hosted by MJU, both in Thailand. The Faculty Forum will be organized by VSU in the Philippines while the Executive Board meeting will be hosted by NTU in Taipei, Taiwan. Hosts for succeeding year's activities will be reconfirmed in the next Executive Board meeting.



(L-R) Dr. Ir. Moch. Sasmito Djati, Vice Rector IV Planning and Cooperation, UB; Prof. Dr. Widodo, Rector, UB; Dr. Glenn B. Gregorio, SEARCA Director and Head, UC Secretariat; Assoc. Prof. Joselito G. Florendo, Deputy Director for Administration of SEARCA.

## UC returns with the 6th Summer School after the pandemic

The UC successfully offered the 6th UC Summer School from 13-27 November 2022 at the Banyuwangi Regency and Malang, Indonesia. This year's offering with the theme "Crop Diversification, Mixed Cropping, and Risk Management in Smallholders' Agriculture in the Context of Climate Change" was jointly organized by Universitas Brawijaya (UB) in collaboration with L'Institut Agro of France. Specifically, the course aimed for the post-graduate participants to collectively build a framework for the assessment of mixed cropping and risk evaluation in smallholders' agriculture; develop their capacities on integrated sustainability of production systems through active learning, and examine how strategic choices and the cropping systems adopted at the farm/household level evolve and can uphold their performance in the context of changes related to climate or other regulations.

Thirty-one (31) graduate students from the UC member institutions and L'Institut Agro attended the summer school. Prior to their arrival in Malang, Indonesia, the participants met twice online to prepare for their upcoming trip. They likewise participated in a three-day seminar at UB in preparation for their fieldwork. The students spent one week developing a multidisciplinary assessment in Kemiren Village and the Banyuwangi Regency together with the resource persons from UB and L'Institut Agro.



The participants developed a co-learning approach with the local farmers and stakeholders in the villages. Investigation tools used during the program were participatory interviews, focus group discussions, and direct measurements of the economic and agronomic performance of the local farms. Data gathered was then processed and analyzed and the results of the studies were presented on 26 November 2022 during the closing of the UC Summer School, with the UC Executive Board Members in attendance.

The 6th UC Summer School was the first activity of the UC to be conducted face-to-face after the pandemic. The said activity has been postponed from 2020-2021 due to pandemic restrictions as the virtual conduct of the program will not satisfy the active learning component of the course. The Summer School is a postgraduate course designed to enhance the understanding of students and other professionals in rural studies, agriculture, and natural resource management on the importance of the interdisciplinary approach in tackling the issue of food and nutrition security in Southeast Asia for sustainable development.



# CLSU organizes the 4th UC Faculty Forum



The 4th University Consortium (UC) Faculty Forum successfully concluded and gathered more than 40 UC officials, faculty members, and guests at the Science City of Muñoz, Nueva Ecija, Philippines. Held on 5-6 December 2022 with the theme Future Proofing Agriculture, the Forum aimed to gather scholars to discuss strategies to ensure agricultural productivity in a future world that is full of uncertainties and confronted with environmental and social problems. The 4th UC Faculty Forum was the first major event hosted and organized by Central Luzon State University (CLSU) for the UC.

A total of 37 papers were presented in four parallel sessions that tackled food loss and waste (Session 1), impacts of urbanization and climate change on agriculture (Session 2), smart and other cutting-edge technologies for agriculture (Session 3), and promoting agriculture as a career option among the youth (Session 4). Session presenters were from IPB University, Universitas Gadjah Mada, and Universitas Brawijaya, all from Indonesia; Universiti Putra Malaysia; University of the Philippines Los Baños, Visayas State University and CLSU from the Philippines; Kasetsart University and Maejo University from Thailand; National Taiwan University; Tokyo University of Agriculture; University of British Columbia in Canada; and the Southeast Asian Regional Center for Graduate Study and Research in Agriculture (SEARCA), which also serves as the UC Secretariat.

The UC invited Prof. Robert C. Kemerait, Jr. from the University of Georgia, USA as plenary speaker on the topic of Recruiting the Best and the Brightest: Feeding the Future Depends on It. Prof. Kemerait proposed the following three ideas on recruiting the best students to go into agriculture: 1) increased personal mentoring of young people before they reach college age; 2) concerted efforts to better market the opportunities for careers in agriculture, and 3) greater availability of financial aid to provide increased opportunity for the study of agriculture.



*Prof. Robert C. Kemerait, Jr. from the University of Georgia, USA served as a plenary speaker on Recruiting the Best and the Brightest: Feeding the Future Depends on It.*



The UC Faculty Forum is an annual event that provides faculty members from the UC member institutions with the opportunity to share research findings and explore ideas for further studies. Since 2019, the event has been held annually to foster camaraderie among the UC members while strengthening partnerships for research collaboration.



# Revolutionizing Agriculture: The Future of Farming with UPM's Dr. Siti Khairunniza Bejo



*I hope the public will see that agriculture nowadays is no longer dirty, dangerous, and difficult. Through using modern agricultural tools, agriculture is more attractive, full of excitement, and creates innovation. Hopefully, it will inspire the next generation to work in this crucial area.*

Assoc. Prof. Ts. Dr. Siti Khairunniza Bejo  
SEARCA Regional Professorial Chair  
Grantee, FY 2022-2023



Assoc. Prof. Ts. Dr. Siti Khairunniza Bejo is an Associate Professor at the Department of Biological and Agricultural Engineering, Faculty of Engineering, Universiti Putra Malaysia (UPM). She is also the Head of the Smart Farming Technology Research Center (SFTRC) and a research associate at the Institute of Plantation Studies of UPM. Dr. Bejo's outstanding accomplishments related to the applications of Imaging Technology and Remote Sensing to agriculture afforded her the SEARCA Regional Professorial Chair Grant. Her research specialization includes imaging technology, precision agriculture, remote sensing, artificial intelligence, and the internet of things. Demonstrating how digitalization can make the agricultural sector more resilient to future challenges, she has inspired many individuals through her public lectures, publications in reputable journals, and engagements with the agricultural community.

As a highly respected academician, Dr. Bejo believes that education is key to success. She wanted to help the next generation develop their future career and achieve their highest potential. Teaching is a good platform for this goal because she can teach using her own experiences as a student. She also encourages everyone to meet challenges, and develop soft skills, as these skills are essential for personal and professional success.

Dr. Bejo finished her Bachelor of Computer System and Communications Engineering degree at UPM in 2001. Her career as a lecturer began the next year when she was appointed first as a Tutor at the Department of Biological and Agricultural Engineering. Dr. Bejo's role was to modernize agriculture through ICT and she taught Tutorials for Mathematics Engineering. A year later, in 2003, she was sponsored by the Malaysian Government and UPM to pursue her PhD in Image Processing at the University of Surrey, United Kingdom under the supervision of the late Prof. Maria Petrou. Dr. Bejo's supervisor inspired her to become a good and highly reputable academician, and after three years, she completed her PhD and was subsequently appointed as a Lecturer in 2006. She initially taught Computer Programming for first-year students but as she became a senior lecturer, she taught final-year students courses such as Remote Sensing Applications, Precision Agriculture, and Artificial Intelligence.



Throughout her career from being a Tutor until her present post as an Associate Professor, Dr. Bejo learned the importance of collaboration, patience, understanding, compassion, and flexibility. She is also committed to lifelong learning and expanding her knowledge base. This commitment led to Dr. Bejo's significant contributions to her field, particularly in the discipline and profession of agricultural engineering. She was the Head of the Department of Biological and Agricultural Engineering, Faculty of Engineering, UPM from 2016-2020. She is also active in curriculum development and program accreditation process under the recognition of the Washington Accord, USA, and the Engineering Accreditation Council (EAC), Malaysia. Furthermore, Dr. Bejo provided her expertise to the Bachelor of Agricultural and Biosystems Engineering and Bachelor of Smart Farming Technology programs at UPM. She was the Chairperson of the 5th International Conference on Agricultural and Food Engineering (CAFEi2020) which saw 485 paper presentations from 13 different countries, including Malaysia, Indonesia, Thailand, India, Vietnam, Japan, Iran, Nigeria, Kazakhstan, Germany, Switzerland, the United Kingdom, and the United States. The said conference surpassed the record for the most number of participants in the conference's history.



As a prolific researcher, Dr. Bejo has received grants totaling over USD 1.4 million and has published over 145 scientific papers, including 85 in journals, 53 in conference proceedings, four chapters in a book, and five in professional magazines. Her work also resulted to nine copyrights, one patent granted and one pending patent. Through her position, Dr. Bejo has played a major role in digitizing agriculture in Malaysia to make it more effective, efficient, and sustainable. She actively offers solutions to industries when they consult her for assistance, and her research has been recognized with five international awards. She uses various types of technologies to be adopted in agriculture including imaging technology, drone, the internet of things, and artificial intelligence.

For instance, Dr. Bejo used hyperspectral imaging and a machine learning technique to construct a model suitable for the detection of *G. boninense* infection.

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# Revolutionizing Agriculture: The Future of Farming with UPM's Dr. Siti Khairunniza Bejo

Continued from page 4...

The research demonstrated that healthy and infected seedlings can be identified with 95%-100% accuracy. The findings of this research provided a significant impact on the oil palm industry since it could help prevent the spread of the disease by successfully detecting the asymptomatic infection which cannot be done by manual inspection through human vision. It motivated Dr. Bejo to further investigate the potential of imaging technology for disease detection at the nursery and plantation level by utilizing different platforms of image acquisition, integrating soil information through an IoT system, and expanding this approach to other different crops.

Dr. Bejo wants the public to see that agriculture nowadays is no longer dirty, dangerous, and difficult. By using modern agricultural tools, agriculture has become more attractive, exciting, and innovative. Hopefully, it will inspire the next generation to work in this crucial area. As part of the grant, Dr. Bejo shared her research through a public lecture on Plant Disease Sensing Using Hyperspectral Imaging and Machine Learning Techniques: A Case Study in Ganoderma boninense Infection hosted by the SMART Farming Technology Research Center, UPM, on 27 February 2023.

## UPLB faculty members visit UC member institutions



The Institute of Weed Science, Entomology, and Plant Pathology of the College of Agriculture and Food Science, University of the Philippines Los Baños (UPLB) visited three UC member institutions from 23 January - 10 February 2023. The visit is part of the institute's research on "Capacity Building of HEI Educators in the Teaching of Fundamental and Specialized Crop Protection Courses in the Philippines." Support for the said visit was through SEARCA's grant on Leveling Up Philippine Higher Education Institutions in Agriculture, Fisheries, and Natural Resources (LevelUPHEI AFaR), which is funded by the Philippine Commission on Higher Education, as well as the UC Faculty Travel Grant.

The activities of IWEP include field visits, benchmarking activities, and meeting with the faculties and departments concerned with crop protection courses. The team split into three groups to maximize their visit to IPB University in Bogor, Indonesia, Universitas Gadjah Mada in Yogyakarta, Indonesia, and Kasetsart University in Thailand. The activities are in response to the need to train faculty members of HEIs who teach crop protection courses to increase their students' level of competence.

With the apparent limitations in crop protection teaching, benchmarking in ASEAN universities will allow Philippine HEIs to learn best practices in both normal and blended modes of teaching. It will also help develop a robust and competitive curriculum to attract more students and produce competent graduates. It will enable graduates to be more prepared for the agriculture licensure examination and be more equipped for their future careers in crop protection.



## Clinical psychology expert talks about mental health with SEARCA scholars

The Education and Collective Learning Department (ECLD) of SEARCA organized the 4th GSID Conversations on 16 December 2022 (Friday), 10:00 AM (GMT +8:00), for scholars to talk about mental health problems and its prevention. The webinar was exclusively offered for scholars as part of SEARCA's non-monetary scholarship benefits and on top of the annual customized training programs on English proficiency, writing thesis proposals, conducting data analysis, or other academic or technical concerns. Through the GSID Conversations, SEARCA wants to explore other areas that may interest the scholars or benefit them in their professional and academic development as they are poised to become future leaders of agriculture and rural development in the region.

Prof. Dr. Firdaus Mukhtar, Professor of Clinical Psychology and Deputy Dean for Admission, Institutional Relations & Financial Aid Unit at the School of Graduate Studies, Universiti Putra Malaysia, and the President of the Asian Cognitive Behavior Therapies Association, served as guest speaker for the event. She provided her expert advice on mental health, the symptoms for self-monitoring, and the basis if and when it is time to seek help.

Prof. Dr. Firdaus recognized that the onset of the pandemic and the unique pressures of graduate studies affect the mental health wellness of scholars. She provided an overview of mental health and its difference from mental illness. Prof. Dr. Firdaus likewise shared the red flags to look out for and the different kinds of mental illness and disorders. An important part of the discussion is on the step-by-step treatment and the professionals that the scholars may approach depending on their needs. After the discussion on understanding mental health and disorders, Prof. Dr. Firdaus shared some exercises that scholars can practice to help them cope. This includes slow and deep breathing exercises, creating a plan or to-do list, and joining social, recreational, educational, nurturing, and entertainment activities. Prof. Dr. Firdaus closed the discussion with a video presentation on the 5-4-3-2-1 coping technique for anxiety.

SEARCA reminds the scholars that if they feel down, and depressed, miss their family back home, cannot keep up with the fast pace of their studies, and feel like giving up, they are not alone. Prof. Dr. Firdaus has shared ways how to keep mentally healthy and as the scholarship provider, SEARCA's doors are always open to accommodate the needs of the scholars.



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