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Photo by: Kyaw Kyaw Winn

REACHING THE UNREACHED

A girl collects drinking water away from her village in the Ayeyarwady Region of Myanmar. The girl, the farmer passing by, and others in similar stead are apt to benefit from the country's strategic economic policies—one of which is inclusive growth for all.

Regional integration of Myanmar's agricultural trade tackled in confab

NAY PYI TAW, Myanmar—Agricultural development is a priority agenda for sustained and inclusive growth in Myanmar, especially as it prepares for the ASEAN Economic Community (AEC) 2015. As the South is reshaping the global economic landscape and creating new dynamics in trade, investment, and economic cooperation, South-South Cooperation (SSC) emerges as a key element in sustainable and inclusive economic growth in developing Asia. Myanmar can benefit from enhanced SSC with its larger neighboring countries—particularly with the ASEAN region as well as with China, India, and South Asian countries—as it goes through trade liberalization and other internal economic reforms.

It is in this context that SEARCA conducted a conference-workshop on the Regional Integration of Myanmar's Agricultural Trade: The Role of South-South Cooperation on 4-5 September 2013 in Thingaha Hotel in the country's capital. SEARCA organized the event in partnership with the Ministry of National Planning and Economic Development (MNPED), the National Economic and Social Advisory Council (NESAC), and the Union of Myanmar Federation of Chambers of Commerce and Industry (UMFCCI).

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Ms. Daw Lei Lei Thein, Deputy Minister of MNPED, delivers the keynote address during the opening ceremonies.

This joint effort facilitated the sharing of knowledge on the opportunities, issues, and challenges of regional trade liberalization in relation to the agricultural development of Myanmar and on the important role of SSC in this process.

In her keynote address, Ms. Lei Lei Thein, Deputy Minister of MNPED, echoed the vision of the Myanmar government to become a modern, democratic, and developed nation that meets the aspirations of its people for a better life. In this context, she reiterated the government's strategic economic policies: (1) sustaining agricultural development towards industrialization, (2) balanced and proportionate development among states and regions, (3) inclusive growth for the entire population, (4) and reliable statistical system.

Dr. Gil C. Saguiguit, Jr., SEARCA Director, opened the event and underscored the Center's mandate to support the agricultural and rural development of Myanmar and other member countries of both the ASEAN and SEAMEO through its core programs on research and development, graduate scholarship, and knowledge management.

He also emphasized that "regional integration offers huge market opportunities for Myanmar's

agriculture sector and that the challenge is to enable it to realize its full potential and ensure inclusive and sustainable growth."

The conference was attended by 53 participants, resource persons, and representatives from the organizing agencies. The participants represented various ministries of Myanmar and their attached agencies, nongovernment organizations, private sector, the media, and international development partners of Myanmar. Government agencies represented include MNPED; Ministries of Commerce (MOC); Agriculture and Irrigation (MOAI); Environmental Conservation and Forestry (MOECF); Livestock, Fisheries and Rural Development (MLF&RD), and Foreign Affairs (MOFA); Myanmar Customs Department; and Myanmar Development Resource Institute-Centre for Economic and Social Development (MDRI-CESD).

Experts from various organizations in Cambodia, Lao PDR, Malaysia, Myanmar, the Philippines, Thailand, and Vietnam, as well as the International Rice Research Institute (IRRI) served as resource persons.

The participants shared experiences, lessons learned, and knowledge on the key issues, challenges, and opportunities related to liberalization and regional integration of Myanmar's agricultural trade. They also identified

actions needed to boost Myanmar's agricultural trade and the role of SSC and development partners in the process.

The outputs of the conference-workshop will be further synthesized to make the outcomes more useful to Myanmar's policymakers.

SEARCA will prepare a policy paper on the key issues on regional integration of agricultural trade that were raised during the conference. The policy paper will articulate in more concrete terms the policy recommendations and specific follow-up actions needed to prepare Myanmar's agriculture sector for regional integration. (RBLapitan/BMBurgos)



Dr. Gil C. Saguiguit, Jr. (right), SEARCA Director, presents a token of appreciation to Ms. Lei Lei Thein.

THE SEARCA DIARY

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Myanmar high officials who attended the opening ceremony together with the conference organizers, resource persons, and some participants.

Top PHL agri official, DA executives attend leadership capacity workshop

Philippine Agriculture Secretary Proceso J. Alcala and 31 other executives of the Department of Agriculture (DA) participated in a one-day adaptive leadership workshop held at SEARCA on 30 July 2013.

The executive course *Greater than Leadership Module for the DA Executives* was offered under the *DA-SEARCA Umbrella Capacity Development Program on Strategic Management and Policy for Agriculture Professionals and Executives*.

The Program aims to provide top and middle level executives and managers of the DA with the basic knowledge and skills, along with the mindset required, to make them craft adaptive solutions to their reform initiatives.

The workshop, in particular, aimed to strengthen the leadership capability of DA executives and maximize their adherence to the principles of transparency in the civil service.

The Ateneo School of Government (ASoG) led by Dean Antonio G.M. La Viña adapted the course from a two-week module that its faculty took at the World Bank Institute. Dean La Viña served as resource person along with Dr. Mario C. Villaverde, ASoG Associate Dean; Prof. Adelfo V. Briones, ASoG faculty member; and Ms. Aurma M. Manlangit, Director of ASoG's Jaime V. Ongpin Executive Education Program.

According to the ASoG team, DA, as the principal agency responsible for the development and growth of the agriculture and fisheries sector, has a critical role in ensuring the implementation of reforms that result in improving the plight of the country's poor. DA therefore needs adaptive solutions to the myriad problems faced by the agriculture sector.

The training included an introduction on the adaptive leadership approach to achieving organizational reforms, as well as a discussion of public service ethics and accountability to enable the DA to perform its role in alleviating the plight of the most disadvantaged group in the nation's development efforts. Resource persons used a blend of adult learning methodologies (e.g., lectures, discussions, workshops, coaching).

The workshop aimed to enable the DA executives to adopt a bottom-up and holistic approach to managing their organization; apply adaptive leadership principles in thinking of reforms in the agriculture sector; learn reform



Dr. Gil C. Saguiquit, Jr. (left) presents to Philippine Agriculture Secretary Proceso J. Alcala a miniature replica of the Growth Monument, SEARCA's institutional symbol, as a token of appreciation.



Dr. Mario C. Villaverde (standing), Associate Dean of ASoG, talks about adaptive leadership in the context of reform challenges in the Department of Agriculture.

techniques by differentiating adaptive and technical problems; “think out of the box” in addressing the current leadership challenges in the agriculture sector; know the fundamentals of change and reform in the decision-making of leaders; and develop a working knowledge on ethics and accountability in the public sector. (NARamos)

SEARCA, WorldFish facilitate strategic visioning workshop of bay alliance

CEBU CITY, Philippines—The Iligan Bay Alliance of Misamis Occidental (IBAMO) has crafted its Vision, Mission, and Goal in a *Workshop on Vision, Mission and Goal-Setting (VMG)* facilitated by SEARCA and WorldFish on 17-18 July 2013 in this city. The VMG is key to the alliance's direction-setting toward sustainable development in Iligan Bay.

IBAMO comprises the local government units (LGUs) of Aloran, Jimenez, Lopez Jaena, Panaon, Plaridel, Sinacaban, Tudela, and Oroquieta City and the Provincial Government of Misamis Occidental.

The workshop was conducted as part of the project titled *Implementing an Ecosystem Approach to Fisheries in Small-Scale Tropical Marine Fisheries (EAF)* that WorldFish is implementing in partnership with SEARCA. The participants were key officials from the LGUs and the regional offices of the Department of Agriculture-Bureau of Fisheries and Aquatic Resources (DA-BFAR), Department of Science and Technology (DOST), and Department of Environment and Natural Resources (DENR).

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Vision

IBAMO as a proactive, committed, dynamic alliance of stakeholders for sustainable coastal resource development in Iligan Bay and its communities in Region X.

Mission

Create a roadmap for poverty alleviation in the coastal communities to improve their lives through the use of appropriate technologies in sustaining and preserving marine resources.

Goal

IBAMO aims to increase income and fish supply, and reduce poverty incidence by 20% in 2020.

14 Southeast Asians complete VIAA for climate change workshop

HANOI, Vietnam—Twelve technical officers and two executives from focal climate change offices in seven Southeast Asian countries completed a workshop on *Vulnerability, Impact and Adaptation Assessment (VIAA) for Climate Change: Approaches, Methods and Tools* held on 10-12 July 2013 at Meliá Hanoi Hotel.

The officials and technical staff came from Cambodia, Indonesia, Lao PDR, Malaysia, the Philippines, Thailand, and Vietnam and belong to the Southeast Asian Network of Climate Change Offices (SEAN-CC) of the United Nations Environment Programme (UNEP).

Co-organized for SEAN-CC by SEARCA and the Asia Pacific Adaptation Network (APAN), the workshop provided an overview of the approaches, methods, and tools in vulnerability, impact, and adaptation assessment as inputs to planning of adaptations to climate change.

In their respective welcome remarks, Mr. Mozaharul Alam, UNEP Regional Climate Change Coordinator, and Dr. Gil C. Saguiguit, Jr., SEARCA Director (as read by Dr. Maria Celeste H. Cadiz, SEARCA Program Head for Knowledge Management), asserted that reducing the effects of climate change begins with a thorough evaluation of specific vulnerabilities that would reveal high-priority sectors where countries should focus in developing appropriate climate change adaptation (CCA) initiatives.

During the workshop, Mr. Alam provided the overall context of the need for adaptation plans to be grounded on sound and reliable data derived through application of these assessment tools and procedures. He explained the processes of CCA in development plans at different levels—from international to national and local. He also provided examples of VIAA methods, tools, and data and pointed out gaps for action in the agriculture and water sectors of selected Southeast Asian countries.

The pilot projects of the Food and Agriculture Organization of the United Nations (FAO) in the Philippines and Peru, through Dr. Roberto Pedro C. Sandoval's presentation co-authored with team leader Dr. Hideki Kanamaru, provided two vulnerability frameworks and field-based experiences and insights on designing climate impact and vulnerability assessment. Dr. Sandoval is Climate Change and Food Security Specialist at the FAO Office in Manila, while Dr. Kanamaru is Natural Resources Officer (Climate Change) at FAO's Rome Headquarters. Their project is titled *Analysis and Mapping of Impacts under Climate Change for Adaptation and Food Security (AMICAF)*.

Various experts gave presentations on VIAA tools in the sectors of agriculture, forestry and biodiversity, marine and coastal resources, and water resources; on the economics of climate change adaptation; and experiences in working on

vulnerability assessment and adaptation planning with local governments in three Southeast Asian countries. To complete the adaptation planning cycle, Dr. Sandoval shared his team's insights on assessment, monitoring, and evaluation for results-based adaptation planning.

In his synthesis, Dr. Rex Victor O. Cruz, Chancellor and Professor at the University of the Philippines Los Baños and Philippine Representative to SEARCA's Governing Board, who served as Workshop Technical Coordinator, reiterated the following constraints articulated by Mr. Alam as barriers to mainstreaming CCA in development planning: (1) limited understanding of the nature and extent of risks and vulnerabilities; (2) information and data gaps in VIAA (30 years minimum climate data); (3) lack of capability and other resources; (4) lack of supportive policies, standards, regulations, and design guidance; (5) existing legal or regulatory restrictions; (6) lack of availability or restricted access to finance; and (7) differences in willingness to accept uncertainties.

Workshop participants then identified the methods and tools most applicable and practical in their respective contexts. They also asserted their additional needs and requirements to be able apply said methods and tools in mainstreaming CCA in their development plans and investments. (MCHCadiz)



The VIAA workshop participants, resource persons, and workshop management team with Mr. Mozaharul Alam of UNEP seated at the center, Dr. Puja Sawhney of APAN at his left, and Dr. Rex Victor O. Cruz of UPLB at his right.

SEARCA, WorldFish/ from page 3

Dr. Emilia S. Visco, Chair, Department of Social Development Services, University of the Philippines Los Baños-College of Human Ecology (UPLB-CHE), served as resource person for the formulation of IBAMO's VMG.

Dr. Maripaz L. Perez, WorldFish Regional Director, expressed the commitment and support to IBAMO with high hopes that it will realize its main vision of eradicating poverty in Misamis Occidental

through environmental protection and alternative livelihoods in coastal communities of Iligan Bay.

Dr. Lope B. Santos III, SEARCA Program Specialist and Officer in Charge for Project Development and Management (ProDev), facilitated the workshop, while Ms. Nancy L. De Leon, Program Specialist for Project Development and Management, and Mr. Alvin G. Tallada, Project Management Associate, both of ProDev, provided technical and logistical support.

The meeting was also the venue for the election of a new set of IBAMO officers led by Hon. Francisco T. Paylaga, Jr., Mayor of Panaon, as Chairman. The other elected officers and members of the executive committee are Hon. Diego Dy, Mayor of Plaridel, as Vice Chairman; Hon. Estela Obut-Estaño, Mayor of Tudela, as Secretary; and Hon. Rosario Kais Balais, Mayor of Jimenez, as Treasurer. Hon. Herminia M. Romero, Provincial Governor, will serve as Honorary Chairman of IBAMO. (AGTallada)

Laguna has low capacity to adapt to typhoons, floods – SEARCA study

The Philippine province of Laguna has a relatively low exposure to climate change threats but it is highly vulnerable because of its low capacity to adapt to typhoons and floods, a SEARCA study showed.

The study is the Philippine component of a multi-country project titled *Building Capacity to Adapt to Climate Change in Southeast Asia* funded International Development Research Centre (IDRC) of Canada. Conducted by SEARCA in the Philippines, the study aims to capacitate three Southeast Asian countries—Cambodia, the Philippines, and Vietnam—in research, planning, and action with regard to climate change adaptation. It began in May 2011 and will be completed in December 2013.

One component of the study, led by Engr. Vicente G. Ballaran, Jr., Assistant Professor at the UPLB College of Engineering and Agro-Industrial Technology, aims to build local capacity to adapt to climate change, particularly in vulnerability assessment and adaptation analysis, to address the negative impacts of extreme weather events.

Twelve municipalities and a total of 274 barangays in the province of Laguna were studied to create vulnerability maps. The municipalities are Bay, Calauan, Liliw, Los Baños, Magdalena, Majayjay, Nagcarlan, Pagsanjan, Pila, Rizal, Sta. Cruz, and Victoria.

Engr. Ballaran and his team were able to produce maps of each community's relative vulnerability to climate change.

The study looked at three factors: exposure, sensitivity, and adaptive capacity of each municipality under study.

The results showed that the coastal and lowland areas were the most exposed areas to climatic hazards like typhoons and floods. Likewise, coastal areas were the most vulnerable in terms of sensitivity or the degree to which the community is affected by climate change stressors.

Moreover, the study considered infrastructure, economic, technological, social, and human factors to reflect the municipalities' adaptive capacity.

Results showed that Magdalena, Calauan, and Majayjay were the most vulnerable municipalities because of the communities' low ability to adjust their practices and behavior to reduce the impacts of climate change. On the other hand, Los Baños, Pagsanjan, and Victoria had the highest adaptive capacity among the municipalities under study.

Engr. Ballaran noted that identifying the vulnerable areas in Laguna is relevant to avoid extreme climatic events that may



Engr. Vicente G. Ballaran, Jr., Assistant Professor at the UPLB-CEAT and one of the leaders of the SEARCA study on climate change adaptation in Laguna, presents the map depicting exposure to climate change risks of the Laguna towns under study at the SEARCA Agriculture and Development Seminar Series on 13 August 2013.

lead to devastation of livelihood means; wreckage of houses, buildings, and other structures; destruction of natural resources and biodiversity; and death among affected populations.

He further emphasized that all these negative impacts translate to huge economic losses that could be detrimental to food security.

The results of the study are expected to help the local government units in Laguna to identify and prioritize appropriate adaptation projects to increase each municipality's adaptive capacity, and thereby reduce the impacts of climate change.

Engr. Ballaran's presented these results of the study in a seminar titled *Climate Change Vulnerability Mapping of Selected Municipalities in Laguna, Philippines* at the SEARCA Agriculture and Development Seminar Series (ADSS) held on 13 August 2013 at SEARCA. (MVPAranas)

SEARCA implements capacity building project for agrarian reform beneficiaries

PAMPANGA, Philippines—The Department of Agrarian Reform Regional Office III (DARRO III) based here and SEARCA signed on 10 July 2013 a Memorandum of Agreement (MOA) for the implementation of the *Market-Oriented Agri-Technology and Agri-Extension Services* under the *Agrarian Reform Community Connectivity and Economic Support Services (ARCESS)* in the Philippine provinces of Bulacan and Nueva Ecija.

ARCESS is a support service delivery mechanism of DAR that was created to contribute to the overall goal of rural poverty reduction, particularly in agrarian reform areas.

The project is consistent with Philippine Republic Act 9700 or the Comprehensive Agrarian Reform Program (CARP) Extension with Reforms, which in turn is also aligned with the Philippine Development Plan to attain competitive and sustainable agriculture and fisheries.

One of the main objectives of the ARCESS project is to improve the productivity of agrarian reform beneficiaries (ARBs) through the provision of strategic subsidies to ARB organizations (ARBOs) in the form of agri-technology and agri-extension services.

For the provinces of Bulacan and Nueva Ecija, SEARCA will support 15 ARBOs in the preparation of their respective farm production plan, common service facility (CSF) manual, crop production techno guides, and conduct of capacity building program.

In the ceremonial signing, Dr. Gil C. Saguiguit, Jr., SEARCA Director, was represented by Dr. Lope B. Santos III, Program Specialist and Officer in Charge, Project Development and Management Department (ProDev), and Mr. Alvin G. Tallada of ProDev. On the other hand, DARRO III was represented by Mr. Antonio V.

Evangelista, Regional Director; Ms. Ileana B. Pangiliinan, Bulacan Provincial Agrarian Reform Officer (PARO); and Mr. Renato B. Escobar and Mr. Romeo S. Cordero, both Nueva Ecija PAROs. (NLDeLeon)



Dr. Lope B. Santos III (right), Program Specialist and Officer in Charge of SEARCA's ProDev, speaks at the ceremonial signing of the memorandum of agreement between SEARCA and DAR. With him in the photo is Mr. Antonio V. Evangelista, Regional Director of DARRO III.

SEARCA convenes food security experts in regional meet

Food security is an overriding development concern in Southeast Asia and is addressed by governments using different approaches, considering their specific country contexts and varying levels of development. Nevertheless, many countries continue to be confronted with the same issues that impede food security.

Given the multiplicity of factors and the complex nature of food security, and as the region moves toward greater regional trade and economic integration, it is believed that food security can be best achieved through collective regional action and active collaboration by development actors within and outside the region.

It is in this light that SEARCA organized a regional consultation-workshop for developing an Umbrella Program on Food Security for Southeast Asia held on 25-26 July 2013 at its headquarters. It was a joint undertaking of SEARCA, the Food Security Center (FSC) of Germany's University of Hohenheim, and the Southeast Asian University Consortium for Graduate Education in Agriculture and Natural Resources (UC).

The workshop aimed to develop an Umbrella Food Security Program for Southeast Asia that will harness and direct the expertise of the SEARCA-initiated UC, and partner research institutions, networks and universities towards a food-secure Southeast Asia.

In his welcome remarks, Dr. Gil C. Saguiguit, Jr., SEARCA Director, recalled that as early as 2009 ASEAN Member States already adopted the ASEAN Integrated Food Security (AIFS) Framework and that ASEAN and SEAMEO were already discussing collaboration to address issues of common concern, including food security, in preparation for the targeted achievement of the Millennium Development Goals in 2015.

Dr. Saguiguit also said that while there are many food security research initiatives in Southeast Asia, they are mostly national in scope and dispersed across the region. Hence the need for an umbrella program that will mobilize collective efforts and resources needed to address common food security issues and relevant food security thrusts of ASEAN.

The consultation-workshop was attended by 25 participants from the UC, regional and strategic partners of the FSC, and partner universities in countries within the Greater Mekong Subregion, government agencies from SEAMEO member countries, and SEARCA.

At the end of the consultation-workshop, the participants had a more focused perspective and understanding of food security in the context of Southeast Asia or ASEAN. They also levelled-off on a conceptual framework for collaborative research, capacity development, and knowledge management on food security in the region. They discussed and prioritized food security issues and gaps in which to focus the collaborative work, and determined the best way for the UC, SEARCA, FSC and other partners to jointly make a substantive contribution to food security in the region.

The participants also initiated the development of the Umbrella Program on Food Security for Southeast Asia and analyzed the expertise, priority areas, and interest for collaboration of the UC and partners within the framework of the umbrella program.

Dr. Paul S. Teng, Dean of Graduate Studies and Professional Learning at the National Institute of Education, Nanyang Technological University in Singapore and SEARCA Senior Fellow, served as a resource person and overall workshop chairperson. The other resource persons were Dr. Mei Rochjat Darmawiredja, Secretary for Food Security Agency of the Indonesia Ministry of Agriculture; and Dr. Dinah Pura T. Depositario, Associate Professor at the University of the Philippines Los Baños-College of Economics and Management (UPLB-CEM) and SEARCA Adjunct Fellow.

The members of the panel who provided their comments and suggestions for improvement of the workshop outputs were Dr. William G. Padolina, President, National Academy of Science and Technology (NAST) of the Philippines, and Dr. Ma. Concepcion C. Lizada, Professor Emeritus in Food Science, UP Diliman, both of whom are SEARCA Senior Fellows; Ms. Sonny P. Tababa, Director for Biotechnology Affairs, CropLife Asia; and Ms. Rosalie M. Ellasus, Board Member, Asian Farmers Network and Philippine Maize Federation, Inc.

The activity was spearheaded by SEARCA's Research and Development Department and Graduate Scholarship Department. (BMBurgos/HMCustodio)



Participants, resource persons, panelists, and organizers of the regional consultation workshop.

31 ASEAN agricultural representatives participate in climate proofing workshops

Fifteen representatives from the Association of Southeast Asian Nations (ASEAN) Sectoral Working Group (ASWG) in livestock and fisheries, and 16 representatives from the ASWG in crops and forestry participated in two workshops on *Integrating Climate Change Adaptation into Development Plans and Investments* held in September 2013.

The first workshop was held on 3-5 September at SEARCA, and the second workshop was hosted by the Regional Community Forestry Training Center (RECOFTC) in Bangkok, Thailand on 24–26 September.

The two workshops are funded by the ASEAN-Programme on Response to Climate Change: Agriculture, Forestry, and Related Sectors (GAP-CC)/Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH with SEARCA and RECOFTC as partners.

The collaborative effort aimed to build capacities of Sectoral Working Groups of the ASEAN Multi-Sectoral Framework on Climate Change: Agriculture and Forestry towards Food Security (AFCC) on Climate Proofing in the ASEAN context.

Specifically, the two workshops aimed to: (1) promote an understanding of climate change impacts and the need to mainstream climate

adaptation into policies, action plans, and projects of the ASWG; (2) facilitate identification and piloting of applications of climate proofing to selected ASEAN initiatives within the AFCC Sectoral Working Group Strategic Plans of Action; and (3) qualify representatives of ASWG as advocates for further application of the climate proofing methodology and mainstreaming of climate adaptation in strategies and activities at ASEAN and member state level. To achieve these objectives, the participants worked out systematic steps toward climate change adaptation and mainstreaming these initiatives into sectoral plans, policies, and strategies.

The training-workshop drew from the increasing awareness among policymakers and planners in many developing countries that climate change impacts on agriculture pose significant threats to food security. Taking into account the effects of climate change in policies, strategies, development plans, and projects to enhance agricultural production and ensure long-term food security at the national, sectoral, local, and project levels has become one of the greatest challenges in promoting adaptation to climate change and to make these policy initiatives, strategies, and investments “climate proof.”

The training-workshop and reference materials were based on the Organization for Economic



Mr. Trieu Van Khoi, Officer, Department of Planning and Finance, Vietnam Administration of Forestry, presents his group's case work analysis assessing vulnerability during training-workshop held at RECOFTC on 25-26 September 2013.

Co-operation and Development (OECD) Policy Guidance on *Integrating Climate Change Adaptation into Development Co-operation*. Its publication was funded by the German Federal Ministry for Economic Cooperation and Development (BMZ) and was developed by GIZ in coordination with OECD, together with a host of reviewers from development agencies, nongovernment organizations, and research institutions from around the world.

At the end of the workshop, the participants applied the climate proofing methodology on selected real cases that they submitted prior to the workshop. (Reports from RBBantayan)

ADB and SEARCA discuss potential collaboration to assist Myanmar university

The Asian Development Bank (ADB) has expressed interest in SEARCA's Institutional Development Assistance to Yezin Agricultural University (YAU) of Myanmar in view of its plans for long-term sustainable investment, particularly in academic institutions.

This was relayed by Dr. Lourdes S. Adriano, Advisor and concurrently Practice Leader, Agriculture, Rural Development and Food Security Unit, Regional and Sustainable Development Department (RSDD), ADB, during her visit to SEARCA on 12 July 2013. She was accompanied by Dr. Jiangfeng Zhang, Principal Natural Resources and Agriculture Specialist also of RSDD.

They were received by Dr. Gil C. Saguiguit, Jr., SEARCA Director, and key officers and staff of the Center, and given a briefing about SEARCA and its Institutional Development Assistance Program.

Dr. Saguiguit said SEARCA's assistance to YAU is focused on the development of its education, research, and extension programs. In this connection, SEARCA organized a *Strategic Planning Workshop for YAU* held at its headquarters in March 2013 to help the university craft its strategic development plan titled *Future Directions of YAU: Human Resources, Technological Innovations and Service 2013-2030*.

He emphasized that SEARCA is assisting YAU in developing its capacities to effectively service the Ministry of Agriculture and Irrigation (MOAI) in implementing the Minister's Nine-Point Reform Agenda for agricultural development. This includes reforms for land management and administration, advanced agriculture practices and seed industry, water resources management, agricultural mechanization, advanced agro-based industry, human resource development, research and technology development, credit services, and market information service. (LLDDomingo)



Dr. Lourdes S. Adriano (fourth from left) and Dr. Jiangfeng Zhang (left) of the ADB with Dr. Gil C. Saguiguit, Jr. during their visit to SEARCA on 12 July 2013.

Snapshots



Mr. Saiful Rizal bin Haji Marali (left), Acting Principal of Wasan Vocational School, Ministry of Education, Brunei Darussalam and Brunei's Representative to SEARCA's Governing Board, was briefed about SEARCA and its programs and activities on 26 July 2013 while he was at the Center to participate in the *Regional Consultation Workshop on the Umbrella Program on Food Security for Southeast Asia*. Dr. Gil C. Saguiguit, Jr. (right), SEARCA Director, led the SEARCA Management Committee in briefing the Bruneian official.



Dr. Saguiguit (right) apprised Philippine Agriculture Secretary Proceso J. Alcala (left) about SEARCA, its programs, and collaborative projects that SEARCA has had with the Department of Agriculture during the official's visit to the Center on 30 July 2013. Secretary Alcala also attended the *Greater than Leadership Module for DA Executives: An Adaptive Leadership Workshop* conducted by SEARCA on the same day.



A delegation from the French Agricultural Research Centre for International Development (CIRAD), French Development Agency (AFD), and the French Embassy in the Philippines visited SEARCA on 9 July 2013. The delegation comprised Dr. Jean Claude Legoupil (second from right), Head of CIRAD's Conservation Agriculture and Engineering Unit and Regional Coordinator of the Conservation Agriculture Network in Southeast Asia (CANSEA); and Mr. Benoit You'lebot (leftmost) of AFD; and Ms. Helene Delille (second from left), Scientific Attaché, French Embassy. They were received by Dr. Saguiguit (rightmost), along with Dr. Virginia R. Cardenas, Deputy Director for Administration and the SEARCA program heads. The purpose of the visit was to explore possibility of enlisting SEARCA in CANSEA, which aims to implement projects of regional interest. They also discussed SEARCA's collaborative projects with CIRAD and other partners in Southeast Asia.



Dr. Wayne Parrott, Professor of Crop Science, University of Georgia, USA, delivered a lecture on *Biotech Tools for Smarter Agriculture* on 27 September 2013 at SEARCA. He called on plant breeders and biotech experts to continue testing and developing genetically-modified (GM) crops, noting that small Filipino farmers will benefit from them. He explained that GM crops are here to stay since "they are part of the solution and not part of the problem." He added that simply put, "no negative claim has ever been confirmed."



Mr. Haji Sharifuddin bin Haji Mohd Salleh (center), Director, and Dr. Paryono (right), Deputy Director for Professional Affairs, both of the SEAMEO Regional Centre for Vocational and Technical Education (VOCTECH), visited SEARCA on 19 August 2013 for a briefing on the Center's programs and activities and other matters pertaining to Center's administration and operations. They were received by Dr. Saguiguit (left) and the rest of the SEARCA Management Committee.



Twenty bio-business students from Tokyo University of Agriculture (Tokyo NODAI), visited SEARCA on 8 August 2013 for a briefing on the Center's programs and activities. They were accompanied by Tokyo NODAI Professors Gentaro Suzumura (front row, second from left) and Hiroki Inaizumi (standing, leftmost), and Associate Professor Loida E. Mojica of the University of the Philippines Los Baños-College of Economics and Management (UPLB-CEM), who coordinated the visit. The briefing on SEARCA, its research programs, and Biotechnology Information Center (BIC) were given by Dr. Virginia R. Cardenas, Deputy Director for Administration; Mr. Henry M. Custodio, Program Specialist for Research and Development; and Ms. Sophia M. Mercado, BIC Program Management Associate, respectively.



Twelve undergraduate students of the National University of Singapore (NUS) pose with Dr. Saguiguit (front row, third from left) during their visit to SEARCA on 22 July 2013 for a briefing about the Center, particularly its Graduate Scholarship Program. They were accompanied by Dr. Ben C. Tan (front row, third from right), Adjunct Associate Professor; Dr. Mary Rose C. Posa (front row, second from left), teaching staff; and Mr. Tommy Kho (front row, rightmost), teaching assistant, all of the NUS Department of Biological Sciences. The briefing was given by Dr. Editha C. Cedicol (front row, rightmost), SEARCA Program Head for Graduate Scholarship, and Dr. Mariliza V. Ticsay (front row, second from right), SEARCA Unit Head for Knowledge Resources.



Eleven PhD students from Bangladesh visited SEARCA on 2 July 2013 for a briefing on the Center's programs and activities. Their visit was part of the *Study Tour Program for In-Country PhD Scholars* implemented by the Bangladesh Agricultural Research Council (BARC) under its National Agricultural Technology Project. The students were accompanied by faculty members of UPLB-CEM. They were received by Dr. Maria Celeste H. Cadiz (receiving a token from the Bangladeshi delegation in the photo), SEARCA Program Head for Knowledge Management; and Ms. Carmen Nyhria G. Rogel (rightmost), SEARCA Program Specialist for Research and Development; and Dr. Cedicol (not in photo).

SEARCA Director joins SEAMEO CDM, workshop

BANGKOK, Thailand—Dr. Gil C. Saguiguit, Jr., SEARCA Director, participated in the *SEAMEO Center Directors Meeting* (CDM) held on 1–3 July 2013 at the Marriott Bangkok Sukhumvit Hotel.

The annual CDM brought together 20 of the 21 SEAMEO Center Directors, representatives of associate member countries, and key officials of affiliate SEAMEO members and partner organizations who discussed collaborative activities, proposals, and plans between and among SEAMEO and its Centers. The CDM served as a venue for presenting each Center's accomplishments for the past fiscal year and for discussing various SEAMEO initiatives.

Among the initiatives is the development of a SEAMEO Knowledge Management (KM) System whose design will cut across and harmoniously run among and between all 21 diverse SEAMEO regional centers based in various countries in the region. As SEARCA leads the development of the SEAMEO KM System, it convened SEAMEO centers together with the SEAMEO Secretariat (SEAMES) in a workshop last year to level off the understanding and motivations regarding said KM system. The next step, Dr. Saguiguit said at

the CDM, is to organize a community of practice among all the SEAMEO centers using Moodle, an open source learning management system.

During the networking session, SEARCA had an opportunity to discuss with the ASEAN-China Centre prospects for student and faculty exchange should there be Chinese universities of agriculture interested to join the Southeast

Asian University Consortium for Graduate Education in Agriculture and Natural Resources (UC) that SEARCA initiated 24 years ago and for which it continues to serve as Secretariat. Aside from providing a student and faculty mobility facility, UC will also be involved in crafting and

SEARCA Director/ to page 14



The SEARCA delegation to the CDM included Dr. Saguiguit (third from right); Ms. Adoracion T. Robles (second from right), Executive Coordinator, and Ms. Leah Lyn D. Domingo (third from left), Public Relations Specialist, both of the Office of the Director; and Mr. Arnel R. Dabina (leftmost), Financial Analyst (rightmost), and Mr. Gilbert A. Gilbuena, Financial Assistant, both of the Accounting Unit. Also in the photo is Dr. Jesus C. Fernandez (second from left), Deputy Director for Programme and Marketing, SEAMEO Regional Centre for Tropical Biology (BIOTROP).

Saguiguit awarded UPLB Outstanding Alumnus

Dr. Gil C. Saguiguit, Jr., SEARCA Director, was awarded Outstanding Alumnus in Agriculture and Rural Development during the 35th Foundation Day of the University of the Philippines Los Baños-College of Economics and Management (UPLB-CEM) commemorated on 26 July 2013.

Dr. Saguiguit was recognized for his significant contributions to agricultural and rural development in Southeast Asia throughout his career. In particular, UPLB-CEM cited him for “bringing honor and prestige to his Alma Mater... through his outstanding achievements in project

and financial management and implementation, fund generation, rural development and extension, participatory community-based and multi-disciplinary research” and “his noteworthy contributions to agricultural education and human resource development.”



Dr. Gil C. Saguiguit, Jr. (second from left), SEARCA Director, with UP President Alfredo E. Pascual (second from right), Dr. Rex Victor O. Cruz (rightmost), UPLB Chancellor; and Dr. Isabelita M. Pabuayon, Dean of UPLB CEM, at the awards ceremony where he was feted as UPLB-CEM Outstanding Alumnus in Agriculture and Rural Development during the College's 35th Foundation Day.

“I am grateful to the College and most honored to receive this award. ... There is something about receiving an award from one's Alma Mater—somehow it is all the more special and fulfilling... and will certainly be cherished during my retirement years,” said Dr. Saguiguit during the Special Convocation and Awarding Ceremonies held at UPLB-CEM.

This award adds to Dr. Saguiguit's numerous distinctions from national and foreign institutions for his exemplary work in the agriculture sector. These include the *Chevalier de l'Ordre du Mérite Agricole* (Knight of the Order of Agricultural Merit) bestowed by the French Government for his commitment to strengthen cooperation between France and the Philippines in the areas of agricultural research, education, and culture. Early in 2013, Dr. Saguiguit was also conferred an Honorary Doctorate Degree in Applied Economics by Maejo University in Thailand for his contribution to human resource development in the country and in Southeast Asia. (EGPandanan)

SEARCA joins LBSCFI celebration of national S&T week

LOS BAÑOS, Laguna—SEARCA participated in *Syensaya 2013: S&T toward a Smarter Science Community* held from 31 July to 2 August 2013.

Syensaya is a celebration of the annual National Science and Technology Week (NSTW) and it is the banner program of the Los Baños Science Community Foundation Inc. (LBSCFI), of which SEARCA is a founding member.

Syensaya 2013 featured the “Wonderama” science discovery exhibit on 31 July-2 August, a technology forum on 1 August, and the R&D Awarding Ceremony on 2 August. The opening program was held at the Copeland Gym of the University of the Philippines Los Baños (UPLB).

A ‘smarter’ mindset

In the message of Secretary Mario G. Montejo of the Philippine Department of Science and Technology (DOST) at the opening program, which was read by DOST Undersecretary Carole Yorobe, he commended the LBSCFI for its celebration of this year’s NSTW and for echoing the theme of the national celebration.

“At DOST, ‘smarter’ is actually a mindset of continually finding better ways of doing things. It is leveraging S&T to come up with new and better products, processes, services, and systems to improve the lives of Filipinos,” he said.

He explained how DOST is integrating smarter technologies into its current R&D by citing some examples, including the team-up of Geohazard Mapping and Assessment Program and Project NOAH, both under DOST. Their outputs include the completion of multi-hazard mapping of 18 of the most vulnerable locations in the country as well as geohazard maps for 496 cities and municipalities. In addition, 525 automated water level monitoring stations and rain gauges were installed in 18 major river basins throughout the country.

Syensaya highlights

Elementary and high school students came in droves to visit the Wonderama, an interactive science exhibition that aims to increase awareness about science and how it could improve the quality of life. As it was also a venue for showcasing the programs and projects of LBSCFI member agencies, SEARCA was among the exhibitors.

This year’s “Talakayan,” a technology forum, was held at the DOST-Ecosystems Research



DOST Undersecretary Carole Yorobe represented DOST Secretary Mario Montejo at the opening program of Syensaya 2013.

Region IV-A and the Industrial Technology Development Institute (ITDI). The participants included food entrepreneurs who were part of the One-Barangay-One-Product (OBOP) Project of the Municipality of Los Baños as well as LBSCFI member agencies. The activity was also intended to help sustain LBSCFI’s partnership with these stakeholders.

Once again, SEARCA hosted the R&D Awarding and Closing Ceremonies. Speakers included Mr. Arturo Carballo, Jr., Senior Operations Manager of the Nido Fortified Science Discovery Center in SM Mall of Asia; Dr. Enrique L. Tolentino, Jr., UPLB Vice Chancellor for Community Affairs, representing UPLB Chancellor Rex Victor O. Cruz who is also the incumbent LBSCFI President; Dr. Danilo C. Cardenas, Deputy Executive Director for R&D, Philippine Council for Agriculture,

and Development Bureau (ERDB). Presentations and discussions focused on food safety and packaging technology as well as marketing and financing, with resource persons from the Department of Science and Technology (DOST)

Aquatic and Natural Resources Research and Development (PCAARRD); and Dr. Virginia R. Cardenas, SEARCA Deputy Director for Administration.

The PARRFI R&D Award (Development Category) was presented to a team of researchers and innovators from the Forest Product Research and Development Institute (FPRDI) for their work titled “Design and Development of Bamboo Flattening Machine.” The members of the winning research team are Engr. Dante B. Pulmano, Forester Robert A. Natividad, Ms. Carolyn Marie C. Garcia, Engr. Ruben A. Zamora, and Mr. Eduardo M. Atienza. Dr. Ramon V. Valmayor, President of Philippine Agriculture and Resources Research Foundation, Inc. (PARRFI), was on hand to present the award.

A video of the bamboo flattening machine being used to process raw bamboo poles was shown and the research team answered questions about the machine afterward. Items made using flattened bamboo were also put on display at the program venue.

LBSCFI is one of four science communities that DOST established in accordance with Presidential Executive Order No. 784 in 1984. LBSCFI fosters the spirit of sharing resources and expertise among its 22 member agencies based in Los Baños. (LLDDomingo)



The five members of the FPRDI research team who developed a bamboo flattening machine with (from right) UPLB Vice Chancellor Enrique Tolentino, PCAARRD Deputy Executive Director Danilo Cardenas, and PARRFI President Ramon Valmayor at the R&D Awarding and Closing Ceremonies held at the SEARCA Umali Auditorium.



Students queue at the SEARCA booth in the “Wonderama” science discovery exhibit at the UPLB Copeland Gym.

SEARCA holds 1st IDRC uplands fellowship confab

The Southeast Asian Upland Agriculture Fellowship, a project under the auspices of the International Development Research Centre (IDRC) of Canada and SEARCA, conducted its *First Annual Fellowship Plus Conference-Workshop* on 24-26 September 2013 at SEARCA's headquarters.

With *Food Security and Sustainable Agriculture Development in the Uplands: Challenges and Opportunities* as its theme, the conference aimed to add to the scholars' knowledge on food security through lectures and paper presentations by experts on food security and sustainable agriculture.

Twenty-seven of the 33 IDRC-SEARCA scholars from Cambodia, Lao PDR, and Vietnam attended the conference. These scholars are pursuing their master's programs with researches related to sustainable upland agriculture and food security at the University of the Philippines Los Baños (UPLB); and Chiang Mai University (CMU), Khon Kaen University (KKU), and Kasetsart University (KU), all in Thailand. Two participants came from KU, seven from CMU, four from KKU and 14 from UPLB.

Dr. Gil C. Saguiguit, SEARCA Director, welcomed the participants. He said SEARCA is pleased to be the implementing agency of the special IDRC program, which aligns well with SEARCA's mandate of building capacities of individuals and institutions working for agricultural and rural development in Southeast Asia.

Ms. Rita Bowry, Senior Program Specialist and Head of IDRC's Fellowships and Awards Program, likewise welcomed the participants. She presented the IDRC's Fellowships and Awards and the International Fellowships Program. She said IDRC supports academic research to help developing countries gain a critical mass of trained and experienced researchers to promote development in their regions. She added that IDRC gives opportunity to a new generation of Canadians and citizens of developing countries to actively participate in international development issues.



Ms. Rita Bowry of IDRC at the opening of the conference.



The participants, resource persons, and organizers of the fellowship conference, including Dr. Gil C. Saguiguit, Jr. (fifth from left), SEARCA Director, and Ms. Rita Bowry (sixth from left), Senior Program Specialist and Head of IDRC's Fellowships and Awards Program.

Internationally recognized ecologist and environmentalist Dr. Percy E. Sajise, discussed the *Contemporary Issues and Challenges in Sustainable Agriculture in Southeast Asia*. Dr. Sajise, a former SEARCA Director (1994-1999), is now a SEARCA Senior Fellow, Adjunct Professor at the UPLB-SESAM, and Honorary Research Fellow at Bioversity International. In his paper, he emphasized the importance of uplands in Southeast Asia and how the researches of the IDRC scholars can respond to the urgent and compelling need for sustainable agricultural development.

On the other hand, Dr. Rex Victor O. Cruz, UPLB Chancellor, talked about *The Role of Research and Extension in Addressing Food Security Concerns in the Uplands of Southeast Asia*. His lecture focused on food production, food access, and food utilization and nutrition issues, and the role of research in finding solutions to problems in said areas. He shared the convergence strategies in achieving food security in the Philippines as outlined by a group of scientists at UPLB: convergence of stakeholders and efforts, convergence in financial mechanisms, convergence in policy, and convergences of competencies.

Dr. Maria Victoria O. Espaldon, UPLB Vice Chancellor for Research and Extension, lectured on *The Comparative Use and Application of Indicators and Methodologies in Assessing Sustainable Upland Agriculture and Food and National Security*. She discussed the indicators of food and nutrition and security, and the food security measure of the Food and Agriculture Organization of the United Nations (FAO). She also emphasized the basis of indicators for assessing sustainable upland agriculture and the quantitative methods that can be used by the scholars in their researches.

During the conference-workshop, 18 scholars presented their thesis proposals to the project advisory committee, who, in turn, gave their

comments and suggestions to improve the proposals. Advisory committee members present at the meeting were Dr. Mom Seng, Vice Rector for International Affairs, Royal University of Agriculture, Cambodia; Dr. Prasit Wangpakapattanawong, Assistant Professor, Forest Restoration Research Unit, CMU Faculty of Science; Dr. Oscar B. Zamora, UPLB Vice Chancellor for Instruction; and Dr. Saguiguit.

The second day was devoted to field visits to two ongoing upland projects. The participants visited a farm in Brgy. Atisan, San Pablo City that showcases a private-public partnership in sustainable livelihood for the uplands. The farm is planted to bignay (*Antidesma bunius*), guyabano (*Anona muricata*), and banana (*Musa* spp.) for wine making. The next stop was the Learning Laboratory for Agroforestry managed by the UPLB College of Forestry and Natural Resources-Institute of Agroforestry. Dr. Roselyn Paelmo, University Researcher at the Institute, gave a tour of the facility and an overview of the techniques and agroforestry systems in the area. Dr. Sajise facilitated the debriefing at the end of the day.

At the closing program, Ms. Bowry said the energy and attitude shown by the scholars during the conference gave her confidence that the scholars will have successful careers.

For his part, Dr. Saguiguit expressed his gratitude to IDRC, the scholars, and the project advisory committee members for their full participation in the conference. He said he hopes for more fruitful collaborations between SEARCA and IDRC in the future.

The *Southeast Asian Upland Agriculture Fellowships* is a three-year capacity building project of IDRC and SEARCA. The project aims to address food security and agricultural development issues in the uplands of Southeast Asia. The project's second annual conference will be hosted by CMU in 2014. (JSLaranas)

Thesis Abstracts

SUPPLY RESPONSE OF MAIZE IN VIETNAM



Nguyen Van Huong
Vietnamese
PhD in Agricultural Economics
University of the Philippines
Los Baños

This study analyzed the trend of maize production in Vietnam and estimated a supply response model to determine factors affecting changes in maize supply. Supply elasticities were estimated from time-series data covering 1986 to 2011 using the rational expectation price models.

Based on three criteria, the rational expectation supply response model with price expectation according to the information set at the time ($t-1$) was chosen as the appropriate model in estimating the supply response for maize in Vietnam. Farmers made use of the available information set in determining expected price. Estimated parameters results in model II indicated that the farmer's response to the expected price of maize was positive, and negative to the expected price of cassava. Hence, maize and cassava are close substitutes.

Maize production also increased with increasing fertilizer application per hectare, area, irrigation, trend as proxy to technology, and agricultural extension policy. Recommendations include issuing policies to support production, enhancing judicious use of fertilizers, increasing maize area, improving irrigation system, increasing government support for farmers, and improving

the extension system with enhanced market information.

ASSESSMENT OF THE INDIGENOUS FOREST MANAGEMENT SYSTEM OF THE ITURKAW IN TULGAO, TINGLAYAN, KALINGA, PHILIPPINES



Robert A. Rodolfo
Filipino
PhD in Forestry
University of the Philippines
Los Baños

This dissertation investigated a little known set of indigenous forest management systems practiced by the Iturkaw people of Tulgao, Tinglayan, Kalinga in northern Philippines. The study had four components: (1) description of the socioeconomic characteristics of the Iturkaw and the biophysical characteristics of their ancestral domain; (2) description of the Iturkaw indigenous forest management system; (3) assessment of Iturkaw beliefs, customary laws, and practices; and (4) assessment of the Iturkaw people's and non-community members' perspectives on the indicators of sustainable forest management.

The Iturkaw live in an ancestral domain that has an elevation of up to 2,525 meters above sea level with slopes of 30% that have rugged terrain with fertile soil, a number of clear rivers, and an average of 85.05 Mg/ha of carbon stock in forests. Their main sources of living are rice terrace farming and swidden farming, but a number are also engaged in gathering non-

timber forest products, particularly bamboo and rattan.

From their ancestors, the Iturkaw have inherited and continue to practice indigenous forest management systems (e.g., *pinawa*, *kiruwhat*, *imong*) which fulfill their needs. They have a wide range of worldviews, belief systems, customary laws, and homegrown policies related to resource use, all of which contribute to the sustainability of their natural resources, particularly forests, wildlife, and water.

Through focus group discussions and guided interviews, the study's respondents have identified simple and easily understood 15 biophysical and 14 socioeconomic indicators to measure the sustainability of their indigenous forest management systems. They also identified and developed a scoring system for the existing condition of their indicators. Of the 20 indicators they selected for scoring, 14 were rated as good, six were rated as fair, and the overall rating was good. This means that the existing condition based on the indicators of indigenous forest management in Tulgao is sustainable.

The Iturkaw are proud that even in this age of technological advancement their traditional knowledge is now slowly being recognized as substantially important. Based on the study's findings, a number of recommendations were made on how to sustain and build upon the Iturkaw's indigenous forest management systems for the benefit of local and downstream communities as well as to address the forest and climate change concerns of the Philippines.

Impact study on SEARCA HRD program published

The impact study on SEARCA's scholarship program conducted by Dr. Alex B. Brillantes, Jr., Professor, University of the Philippines Diliman-National College of Public Administration and Governance, has been published as a SEARCA monograph.

Titled *Determining the Impacts of SEAMEO SEARCA's Human Resource Development Efforts in Southeast Asia*, the monograph is special issue of the *SEARCA Agriculture and Development Discussion Paper Series*.

The study aimed to determine the impacts of the capacity building assistance and interventions of SEARCA in the region. Since it was founded in 1966, SEARCA has graduated close to 1,200

scholars who pursued master's and doctoral studies, and more than 13,000 who completed short-term training courses.

In spite of its well-meaning and purposeful initiatives, SEARCA sought to ascertain its contribution to capacity development for agricultural and rural development in Southeast Asia. For instance, where have the SEARCA scholars gone after completing their graduate programs? What have been their contributions to development, in general, and to agricultural and rural development, in particular? Said contributions may be seen at three levels: policy, organizational, and individual.

The study showed that many of the SEARCA graduate alumni have indeed contributed to the development and improvement of agricultural and rural development. These can come in several forms: (1) that of having been appointed to

influential (though not necessarily visible) positions in the agriculture sector, government, academe, or the private sector; (2) that of carrying out original research that continues to push the frontier of knowledge for agricultural development; and (3) that of crafting policies that have influenced the agriculture and related sectors at the micro or macro levels.

Said contributions may have merited the SEARCA alumni awards and recognition by local and international bodies or organizations.



Impact study/ to page 14

Renowned author, env'tal campaigner tackles biotech and food security

Former anti-genetically modified organism (GMO) activist and renowned British author on climate change Mark Lynas asserted the importance of biotechnology in addressing the challenges of food security during his seminar titled *Meeting the Challenges of Food Security with Biotechnology* held on 23 August 2013 at SEARCA.

The seminar was attended by more than a hundred scientists, researchers, faculty, and students from the University of the Philippines Los Baños (UPLB), International Rice Research Institute (IRRI), SEARCA, and other research institutions in Los Baños, Laguna.

Biotech helps conserve biodiversity

According to Mr. Lynas, there is a need to grow more food from the same area of land in order to protect habitats and address the increasing food demand of a growing population.

Agriculture, he said, is the number one cause of habitat loss, which is a primary reason for biodiversity loss. With modern biotechnology, he said improved crops may be developed to

help address agriculture-related environmental problems such as depletion of freshwater resources and nitrogen wastes.

Biotech can help feed a growing population

Citing statistics from the Food and Agriculture Organization of the United Nations (FAO), Lynas said the growth in yields of major staple food crops is no longer keeping pace with the growth of human population.

He added that there is a need to increase world food production by at least 100 percent by 2050 in order to keep up with the population growth. However, he opined that to double the cropland and food supply, key areas of biodiversity will have to be destroyed.

Biotech needed to cope with climate change

Mr. Lynas also pointed out that with climate change, "we don't have the option to simply continue doing agriculture, simply doing food production as we always have done before..."

"The world's temperatures are rising at such a rate that we now potentially have areas in the world which will no longer be able to produce crops simply because they're going to be too hot. So doing nothing, making the same, and only using the old varieties is not an option," he said.

Science proves that GMOs are safe

He also emphasized the importance of scientific credibility when it comes to GMOs, explaining that peer-reviewed materials or journals should be valued more than mere claims from anti-GMO groups. He cited how recognized scientific organizations worldwide have concluded that products of modern biotechnology are as

safe as their counterparts from conventional breeding.

Mr. Lynas shared that his viewpoint on GM crops changed when he studied biotechnology as part of his research on climate change. He expressed this change of mindset during his lecture at the Oxford Farming Conference in January 2013.

"I apologize for having spent several years ripping up GM crops. I am also sorry that I helped to start the anti-GM movement back in the mid-1990s, and that I thereby assisted in demonizing an important technological option which can be used to benefit the environment," he said at the Oxford lecture.

Mr. Lynas is also a Visiting Research Associate at Oxford University's School of Geography and the Environment in the United Kingdom. He has authored several bestselling books that tackle global issues, including climate change and biotechnology. His book *Six Degrees: Our Future on a Hotter Planet* was also featured on the National Geographic Channel.

In the Philippines, several public sector biotech crops with improved and potentially beneficial traits are nearing commercialization. The fruit and shoot borer-resistant Bt eggplant of UPLB has been projected by studies to have potentially significant socioeconomic and environmental benefits; the multi-location field trials were completed in 2012. The vitamin A-enriched rice of the Philippine Rice Research Institute (PhilRice) and IRRI is another local biotech crop in the pipeline that targets vitamin A deficiency. (JAPanopio/SMMercado)



Mr. Mark Lynas discusses how biotechnology can help in global food security in his seminar at SEARCA on 23 August 2013.

SEARCA Director/ from page 10

implementing an umbrella program on food security in Southeast Asia.

Dr. Saguiguit also participated in a *Workshop for SEAMEO Directors on Evaluation for Development* held back-to-back with the CDM on 4 July 2013

also at Marriott Bangkok Sukhumvit Hotel. The workshop focused on "Strategic Perspectives: Advancing Evaluation Practice in SEAMEO" to build SEAMEO centers' capacity in monitoring and evaluation in line with the identified needs and opportunities in each center. (LLDDomingo)



Dr. Gil C. Saguiguit, Jr., SEARCA Director, informs the CDM of SEARCA's institutional development assistance to young, strategic universities in the region, which is also in support of the effort towards ASEAN integration.

Impact study/ from page 13

All told, these accomplishments and achievements would not have been attained without the moral, financial, and professional support received by the alumni from SEARCA.

The study also identified directions of future research, specifically towards developing leaders in agricultural and rural development. This includes the design and development of a module that would highlight the unique ethos and culture of a SEARCA alumnus. After all, the capacity building interventions of SEARCA have resulted in the emergence of leaders in agricultural and rural development in the region. It is within this context that the impact of SEARCA was examined by this study. (JSLaranas)

Science communication workshop held for PHL regulators

ANTIPOLO CITY, Philippines—Scientists and regulators from the various research and regulatory agencies of the Department of Agriculture (DA), Philippines participated in the *Science Communication Workshop: Enhancing Biotech Knowledge and Communication Skills* held on 23-24 July 2013 at the First Pacific Leadership Academy here.

The workshop was organized by the International Service for the Acquisition of Agri-biotech Applications (ISAAA), SEARCA through its Biotechnology Information Center, and the DA-Biotechnology Program Implementation Unit.

Participants of the workshop were updated on the science of biotechnology, benefits and local and global adoption of genetically modified (GM) crops, and regulatory process on GM crops in the Philippines. At least 35 regulators participated in the workshop.



Participants at work on their message map during an exercise.

Among the topics tackled in the workshop were effective science communication, identification of priority key issues and concerns on GM crop regulation, message mapping, and interviews with the media. The resource persons also shared the principles and tools of science communication and its applications in communicating issues about crop biotechnology.

The resource persons were Dr. Antonio Alfonso, DA-Biotech Program Coordinator, and Dr. Emiliana N. Bernardo, retired Professor of Entomology at the University of the Philippines Los Baños.

Dr. Alfonso stressed the need for prioritizing biotech communication, while Dr. Bernardo emphasized the safety of Bt technology. (JAPANOPio/SMMercado)

SEARCA keynotes/ from page 16

Shift to transdisciplinary approach

Since 2011, transdisciplinary initiatives have been conceptualized and implemented at SEARCA to address the multi-faceted issues of natural resource management, agricultural competitiveness, and food security.

The transdisciplinary approach involves the extensive collaboration between academic, government, and corporate players across local, national, and international levels to solve critical issues. More than just consultations involved in bottom-up planning and participatory development strategies in research, the transdisciplinary approach engages all levels of stakeholders in knowledge generation and project design, including the integration of traditional methods and indigenous knowledge with newly developed and pioneering technologies.

In presenting SEARCA's keynote paper, Dr. Depositario highlighted the Center's *Focused-food Production Assistance to Vulnerable Sectors (FPAVAS) Project* and *From Ridge to Reef Project*, citing them as examples of interdisciplinary projects.

The project *Building Capacity to Adapt to Climate Change in Southeast Asia* and SEARCA's *Umbrella Program on Food Security for Southeast Asia* were singled out as models of transdisciplinary initiatives.

At the end of the keynote lecture, Dr. Depositario said the trend among SEARCA's projects will continue to be more interdisciplinary and transdisciplinary as the Center continues to address increasingly complex and interlinked issues in the agriculture and rural sector.

New network formed

Another highlight of the conference was the formation of the International Interdisciplinary Network (IIN), which intends to provide a platform for higher education institutions for academic, research, and outreach cooperation in fields of common interest.

The network is expected to facilitate the mobility of faculty, researchers, and students to undertake teaching, research, and training within the network membership. The network will initially focus on, but not necessarily be limited to, the following academic and research areas: public health, education for sustainable development, and international business.

As SEARCA's representative to the ICIRD, Dr. Depositario, a SEARCA alumna (MS, 1985-1987) also met with Dr. Chamnian Yosraj, MJU President, who was also a two-time SEARCA scholar (MS, 1980-1983 and PhD, 1987-1990). She also met with Dr. Jatuphong Varith, MJU Graduate School Dean. (DPTDepositario/HMCustodio)



Dr. Depositario delivers the keynote lecture on behalf of Dr. Saguiguit.



Dr. Depositario (left) with Dr. Chamnian Yosraj (middle), MJU President, and Dr. Jatuphong Varith (right), MJU Graduate School Dean, during the visit to the MJU Farm.

Ambassador Urabe commends SEARCA for cooperation with Japan on HRD, research projects

His Excellency Toshinao Urabe, Ambassador of Japan to the Philippines, has expressed appreciation and commended the SEARCA for its work in implementing human resource development and research projects in cooperation with the Japanese government.

Dr. Gil C. Saguiguit, Jr., SEARCA Director, briefed Ambassador Urabe on the Center's human resource development initiatives supported by the Japanese government.

The briefing was conducted when Ambassador Urabe visited SEARCA on 24 September 2013 to deliver the keynote address at the *Symposium on Japan-Philippines Strategic Partnership* co-sponsored by the University of the



Dr. Saguiguit explains to Ambassador Urabe the meaning of SEARCA's institutional symbol titled "Growth," which was presented as a token of SEARCA's appreciation.

Philippines Los Baños Graduate School, Philippine Association of Japanese Government Scholars-South Luzon Chapter, and SEARCA.

Among the collaborative activities between Japanese institutions and SEARCA were research on food fermentation; production of salted cucumber and ginger for export to Japan; sustainability of upland vegetable farming in Laguna and Benguet, Philippines; agro-industry management survey in the Philippines, Thailand, and Taiwan; agro-industrial development planning focused on Cambodia, Lao PDR, Myanmar, and Vietnam; and an integrated rural development project for agrarian reform beneficiaries in Jalajala, Rizal, Philippines.

SEARCA also partnered with several Japanese universities in providing and implementing doctorate scholarships and other academic grants for Southeast Asians. SEARCA had formal agreements with Tokyo University of Agriculture, Nagoya University, and Keio University.

Dr. Saguiguit also informed Ambassador Urabe that SEARCA serves as the thematic node for agriculture of the Asia Pacific Adaptation Network, a regional climate change knowledge network whose main convenor is the Institute of Global Environmental Strategies (IGES) of Japan.

"I have already briefed His Excellency Urabe on SEARCA and Japan's collaborations dating as far back as the 1970s. With this comes the hope that these collaborations will continue and even reach a higher plane," Dr. Saguiguit remarked at the opening of the symposium.

"Japan has already contributed in no small measure to the agricultural development of the 11 member countries in the region SEARCA is mandated to serve. For this assistance and support, we are sincerely grateful," Dr. Saguiguit said. (LLDDomingo)

SEARCA keynotes int'l conference on interdisciplinary R&D

CHIANG MAI, Thailand—Dr. Dinah Pura T. Depositario, Associate Professor at the University of the Philippines Los Baños-College of Economics and Management (UPLB-CEM) and SEARCA Adjunct Fellow, delivered the keynote lecture on behalf of Dr. Gil C. Saguiguit, Jr., SEARCA Director, at the *International Conference on Interdisciplinary Research and Development (ICIRD) in ASEAN Universities* held on 8-10 August 2013 at the Imperial Mae Ping Hotel in this city.

Hosted by Maejo University (MJU), Thailand's oldest agricultural institution, the conference had the theme *IDS for Global Education - Building Bridge through ASEAN*. Co-sponsors include SEARCA, the Interdisciplinary Network of the Royal Institute of Thailand, UPLB Graduate School, and the University of Interdisciplinary Studies and University of California Davis, both based in the United States.

The conference attracted some 300 participants who are academics from higher education institutions, researchers, policymakers, and experts on interdisciplinary approaches from Southeast Asia and countries outside the region.

The SEARCA paper is titled *Cross-Disciplines for Agricultural Development in SEARCA*. It was co-authored by Dr. Saguiguit, Dr. Depositario, and Mr. Henry M. Custodio, SEARCA Program Specialist for Research and Development.

Evolving research models

The paper discussed the evolution and paradigm shift in terms of the level of integration manifested in SEARCA's research programs and projects—from discipline-based to multidisciplinary research, and eventually towards interdisciplinary and transdisciplinary research.

The period from 1969 to 1979 was described as the SEARCA's discipline-based research period. This was when almost all technology-related researches were geared towards increasing agricultural productivity.

The multidisciplinary research period spanned the years 1979 to 1999, when most of SEARCA researches were related to community development, rural development, gender and development, and agro-industrialization and agribusiness.

The interdisciplinary research approach became the dominant type of research conducted by SEARCA's from 1999 to the present. This could be attributed to the Center's research thrusts being natural resource management and agricultural competitiveness.

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