REPORT

ASEAN Technical Meeting and Multi-Stakeholder Policy Dialogue on Higher Agriculture Education, Research and Extension (ASEAN-HAERE) for Food Security and Sustainability in Southeast Asia

December 6-7, 2017. ASEAN Hall, The ASEAN Secretariat Building, Jakarta, Indonesia.

(Photo by Zacyl Rivera-Jalotjot)

****FINAL SUMMARY REPORT**:

This final workshop Report summarizes main results of the **ASEAN Technical Meeting and Multi-Stakeholder Policy Dialogue on HAERE. However, the report is UNOFFICIAL and does NOT represent the views of the ASEAN Secretariat or any ASEAN Member State. It is for discussion purposes only.

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SUGGESTED CITATION

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MAIN SUPPORTERS/PARTNERS (Co-Sponsors)

- Chulalongkorn University School of Agricultural Resources (CUSAR), Thailand
- Food Security Center (FSC), University of Hohenheim, Germany
- Office of the Higher Education Commission (OHEC), Ministry of Education, Thailand
- Southeast Asian Ministers of Education Organization Regional Center for Graduate Study and Research in Agriculture (SEAMEO SEARCA)
- Swedish International Agricultural Network Initiative (SIANI)
- United Nations Educational, Scientific and Cultural Organization (UNESCO)

HOST-SPONSOR: ASEAN Secretariat - Education, Youth and Sports Division

Day 1. Wednesday | 6 December 2017

- Formal registration for attendance at the Secretariat Table commenced at 8:30 am as supervised by **Ms. Zacyl Rivera-Jalotlot** of SEAMEO-SEARCA.
- The technical meeting and policy dialogue started at 9:15 am with **Ms. Abigail C. Lanceta** (Assistant Director, and Head, Education, Youth and Sports Division, Human Development Directorate, ASEAN Socio-Cultural Community Department, The ASEAN Secretariat) as facilitator. She briefly welcomed everyone before inviting **Ms. Rodora Babaran** (Director, Human Development Directorate, The ASEAN Secretariat) for the Host Welcome and Opening Remarks.
    - Ms. Babaran pointed out the good balance of men and women participants in the hall, as well as, the balance of age groups, and mentioned the relevance to the goals of the ASEAN University Network (AUN). She expressed her belief that the meeting and dialogue are useful for the extension education in the ASEAN region. She also conveyed her expectation of a report of the outcome of the gathering from all member states.
- Ms. Lanceta then invited each of the 23 participants in the roundtable to give a brief personal introduction. After this she relinquished her role for the start of the sessions.

- **Background Contexts for APWE Project 47 and Technical Workshop**

Moderator: **Dr. Joy M. Jamago** - SEARCA Alumna & Professor, Department of Agronomy and Plant Breeding, College of Agriculture, Central Mindanao University, Philippines

Resource Persons: **Dr. Wayne Nelles** – Canadian Visiting Scholar, Chulalongkorn University School of Agricultural Resources (CUSAR), Bangkok, Thailand

Dr. Maria Cristeta N. Cuaresma - Program Head, Graduate Education and Institutional Development Department, Southeast Asian Ministers of Education Organization - Regional Center for Graduate Study and Research in Agriculture (SEAMEO-SEARCA), Los Baños, Laguna, Philippines

(Photo by Ms. Zacyl Rivera-Jalotjot)

- **Dr. Nelles** presented the background of the workshop entitled **"Supporting the ASEAN Work-Plan on Education (AWPE) 2016-2020 Through Assessing and**

Strengthening Higher Agriculture Education, Research and Extension in Southeast Asia" which consists of seven sections. He emphasized the sense of urgency on matters that many may tend to ignore such as environmental-social problems like climate change, where agriculture actually makes a huge contribution; raising many concerns and impacting various areas. Dr. Nelles explained that the current mainstream model of agriculture undermines the agri-food system and its resources. He underscored the need (for everyone and society) referring to a recent United Nations report to "wake up before it is too late," and that there is a need for a paradigm-shift in agricultural development. Following the Rio+20 (UN Sustainable Development Conference, 2012) Agreement endorsed by many world leaders, including the ASEAN leaders, the need for more Sustainable Agri-Food Systems (SAFS) is clear. There is a need for a movement towards one direction for sustainable production and consumption.

One key work area for SAFS is "building enabling environments" such as higher education, sciences and extension services. He raised the following questions: What is the role of universities? Do they have significant contributions? Are they part of the solution(s) or part of the problem? What should people involved in agriculture need to know? What technical issues do they need to understand better? Based on many action plans and roadmaps, are we moving forward adequately in the right direction? Do we need more people involved?

He shared that based on the International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD), the results for higher education gravely implied the lack of attention to social sciences particularly in agriculture education, training and research. Hence, SEAMEO and other experts suggest/recommend that universities should be better reorienting their curricula toward sustainable agriculture through a multidisciplinary approach.

The Sustainable Development Goals (SDGs) of 2030 have 17 goals and 169 targets.

https://samunc.files.wordpress.com/2015/09/a0f4b7362b0b2339946df271609fb02a.jpg

The two goals most relevant to the discussion are SDG2 (End hunger, achieve food security & improved nutrition, and promote sustainable agriculture) and SDG4 (Education i.e. Higher/Tertiary References). However, both seem inadequate. There is no mention of agriculture education or roles of universities in farmer extension in either of these two SDGs. Dr. Nelles also shared his belief that achieving the SDGs would be impossible without better data (and analysis). HEIs and university-trained experts can provide data to help governments and policy-makers to understand better, monitor and evaluate the progress of SDGs.

Data for Southeast Asia (SEA) for 2015 showed that 9.4% were undernourished and hunger increased to around 11.5%. A food safety study in Thailand showed 57.1% of fruits and vegetables granted the "Q mark" were found to be contaminated and unsafe. There is also an "agrochemical dependency" problem that often seems like an unhealthy addiction to unnecessary drugs. Important data are needed on many other issues and concerns in ASEAN and global agriculture. There are many ASEAN Plans on AFS and rural sustainability but they need closer study by universities. One big question for universities is how do Southeast Asian universities and other Higher Education Institutions (HEIs) currently deal with regional food insecurity, malnutrition, agrochemical abuse, hunger and poverty?

Nelles also described Chula Project Initiatives with Partners and presented the workshop background of and university involvement in the **ASEAN Work Plan on Education (AWPE), 2016-2020 Project 47** and Agri-food ESD as a sub-theme. The last session (of the present workshop) would be about the Next Steps: Framing (and Funding) AWPE Project 47 Agri-Food System Assessment,

Policy Dialogue and Capacity Strengthening activities for SEA Universities. Thailand is the lead country of this project with the Philippines a co-sponsor.

In this opening presentation, three of the most compelling questions raised that resonated were: How do we frame our roles in the academe for agriculture education for sustainability? What kind of research can we do? What are we doing in our universities?

- **Dr. M.C. Cuaresma** presented a brief overview of SEARCA, its mandate and thrusts, and why it co-sponsored the technical meeting and policy dialogue.

SEARCA is one of 24 regional centers of excellence of the Southeast Asian Ministers of Education Organization (SEAMEO), a treaty organization that promotes regional cooperation in education, science, and culture. SEARCA's mandate is to build the capacities of the 11 SEAMEO member countries in agricultural and rural development through its 3 core programs on graduate education and institutional development, research, and knowledge management towards the end goal of poverty alleviation and food security in Southeast Asia.

For its 10th Five-Year Plan, covering Fiscal Years 2014/2015 to 2018/2019, its overarching theme is Inclusive and Sustainable Agricultural and Rural Development (ISARD), with sub-themes on social inclusion, environmental sustainability, and the crosscutting themes on policies and governance, and regional and sub-regional integration. Hence, the topic of the policy dialogue on HAERE for Food Security and Sustainability aligns well to SEARCA's thrust. As a SEAMEO Center, SEARCA also hopes to make a contribution to the ASEAN Workplan on Education.

- **SESSION 1. Cross-Sectoral ASEAN Policies, Programs, Working Groups and Partnerships implicating HAERE in Member States**

Moderator:	**Dr. Nathaniel Alibuyog -** SEARCA Alumnus & Vice President for Research and Extension, Mariano Marcos State University, Philippines
Panelists:	**Ms. Abigail C. Lanceta** - Assistant Director, and Head Education, Youth and Sports Division, The ASEAN Secretariat, Jakarta, Indonesia

Mr. Pham Quang Minh - Assistant Director and Head, Food, Agriculture and Forestry Division, The ASEAN Secretariat, Jakarta, Indonesia

Ms. Natalia Derodofa - Senior Officer**,** Environment Division, The ASEAN Secretariat, Jakarta, Indonesia

(Photo by Zacyl Rivera-Jalotjot)

- **Ms. Lanceta** presented the topic **"ASEAN 2025: Forging Ahead Together".** She began that in 2015, ASEAN became an e-community which was another direction in ASEAN for all the sectors**.** She reminded the group that ASEAN builds on three pillars: (i) ASEAN Political Security Community (APSC) i.e. to live in peace with one another; (ii) ASEAN Economic Community (AEC) i.e. for a prosperous and highly competitive region; and (iii) ASEAN Socio-Cultural Community (ASCC). i.e. to aim for solidarity and unity. These pillars collectively target Narrowing the Development Gap (NDG) among ASEAN member states, supporting more cooperative approaches to development and equality with a focus particularly on the CLMV countries (Cambodia, Laos, Myanmar and Viet Nam), newer ASEAN members with lesser developed economies. This is also part of an Initiative for ASEAN Integration (IAI)

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Ms. Lanceta also highlighted the ASEAN Post 2015 Vision on Education that aims to promote a community that puts people at its center, sustainable development, access to quality inclusive education, and development of lifelong-learning systems. She emphasized that more than anything else, education should be a bridge across the diverse peoples and cultures in the ASEAN region. She added that in ASEAN, each sector has a sectoral body. The sectoral body in education is the ASEAN Education Ministers Meeting (ASED) and the Senior Officials Meeting on ASEAN Education (SOM-ED). The AWPE 2016-2020 is the sum of many parts or contributions of key players such as SEAMEO, UNESCO, and UNICEF, among others.

She affirmed what Dr. Nelles earlier noted i.e. the need to substantiate or put content and contextualize many of the SDGs, especially on agricultural education. She cited Sub-goals 1-7 where "technical and vocational education and training (TVET)" is very important because of unemployment. There is a great need to strengthen the collaboration between the education sector and other sectors on Education for Sustainable Development (ESD) where the lead countries are Thailand and Philippines. She underscored the importance of submitting expected outputs and publications. Ms. Lanceta said that the group can bring/suggest/propose any content to Sub-goal 7 (including extension education), and ASEAN will make sure this happens especially in encouraging universities to do relevant research and extension programs. She reminded the group that 4.3 M people in ASEAN have no formal education, but there is ASEAN funding for education research and for establishing quality assurance mechanisms to strengthen education.

- **Mr. Minh** presented the topic on **"The ASEAN Cooperation on Food Agriculture and Forestry (FAF)".** The ASEAN Food, Agriculture and Forestry (FAF) Cooperation includes food security, food handling, crops, livestock, fisheries, agricultural training and extension, agricultural cooperatives, forestry, and cooperation on promotion schemes for agriculture and forest products. He explained the structure of ASEAN Cooperation in Food, Agriculture and Forestry or the ASEAN Ministers of Agriculture and Forestry (AMAF).

  AMAF has four visions and seven goals for 2025. The priorities areas of AMAF are crops, livestock, fisheries, forestry, food security & safety, and climate change. Mr. Minh also explained about the Key Deliverables of the ASEAN

Food, Agriculture and Forestry Cooperation (2016-2017). These include the (i) ASEAN Guidelines in promoting responsible investments in agriculture sector prepared and adopted, and the (ii) Guidelines in integrating the gender dimension and marginalized groups to reduce their vulnerability to natural disasters and climate change.

- **Ms. Derodofa** presented an **"Overview on ASEAN Cooperation Framework and Potential ASEAN-MRC Collaboration".** The strategic priorities and programs on ASEAN Strategic Plan on Environment (ASPEN) are nature conservation and biodiversity, coastal and marine environment, water resources management, sustainable cities, climate change, chemical and waste, environmental education, and SCP. She explained about the linkage between the ASCC Blueprint and the ASPEN & Global Priorities. The ASEAN Environmental Cooperation or ASEAN Ministerial Meeting on Environment (AMME) has seven working groups for each strategic plan. The chairmanship of each working group comes from different countries and is rotated every three years. Ms. Derodofa briefly explained some of their programs: (1) ASEAN-ROK Environmental Cooperation Programme (AKECOP) that is about collaborative research and partnerships, as well as, graduate degree/course programs; (2)) ASEAN Peatland Forests Project **(**APFP) that is focused on minimizing forest fires; and (3) ASEAN Eco-Schools Award Programme. She also shared the reports on the ASEAN State of Environment from 1997 until 2017.

- **Questions and Comments:**

Dr. Wayne Nelles: It is interesting to know that there is a working group on agricultural research. They could make stronger links among other people involved in this area. Do these groups cooperate with one another? How can we link with them on the issue of higher education? Maybe we can discuss this as part of the next steps. I have a question about the environment division. I have done a little bit of research with UNESCO involved. But my understanding is that there is no mention about agriculture in the environmental education plan. Under priority 1 (biodiversity), we also had a workshop in Changmai where we identified that agro-biodiversity education has no action plan for ASEAN. Can we discuss more on this tomorrow? How can we invite or encourage more discussion of agriculture and environment together?

Mr. Pham Quang Minh: The (different) working groups work independently. However, sometimes we communicate and link between groups. We have open sessions as well as closed sessions to share views among the working groups.

Ms. Natalia Derodofa: We did not include the sectors for specific issues because the working group has to promote strategic issues. However, we try to highlight the issues about biodiversity, food and nutrition.

Dr. Bambang Suwignyo: We have the FAF. Which program is in charge for food security issue?

Ms. Natalia Derodofa: Food security is a crosscutting issue. There is a working group in charge for food security issues.

Dr. Asdi Agustar: What is being done to ensure quality assurance in higher education? What kind of support is being extended or provided (to the member countries of ASEAN)?

Ms. Abigail C. Lanceta: For the last three years we, have support from EU for Quality Assurance (QA) we have the ASEAN Framework and QA Networks (Malaysia). The ASEAN Qualifications Reference Framework (AQRF) also contains guidelines for QA with a network of QA assessors. We also we link with HEIs.

Dr. Muchtar Mansyur: I would like to know further about what Mr. Minh had mentioned, about the ASEAN guidelines for food security and nutrition. Are there any existing activities related to the issue?

Mr. Pham Quang Minh: We have capacity-building activities to promote food and nutrition security. We develop guidelines and recommendations for food security policy, which is our priority.

Dr. Joy Jamago: What are the upstream and downstream programs or projects for ASEAN agriculture? Current students need to be aware of these programs. We need to make young people become aware of the ASEAN programs so they could align themselves, on what they can do or contribute in the future, after getting their degrees. Perhaps, there is a need for a new subject on ASEAN in academes that substantially introduces ASEAN and its goals and programs.

Ms. Abigail C. Lanceta: ASEAN needs more support for advocacy. There is an ASEAN source book for high school. It is a simple resource for schoolteachers. We have the ASEAN Study Center but not many at present. This only exists currently in four universities because it is expensive to establish (and maintain). In every member state, the Ministry of Education for QA there is a national memorandum shared to all universities. The universities also have to be proactive to get more information about ASEAN. We need to do meetings that are sharing venues for teachers, students, lecturers, and others. However, ASEAN is massive so we make/encourage each sector to share information to the grassroots level. Hence, we welcome recommendations from your group on specific activities relevant to ASEAN agriculture. The programs of the ASEAN Secretariat are open and not fixed. You can facilitate forums for agriculture educators and agriculture students. Some funding is available for these activities.

Dr. Siti Amanah: I want to know about the achievements. What have been the achievements for each plan (on ASEAN agriculture)? How far are the ASEAN youth interested in agriculture? There is a wide room for research collaboration among ASEAN countries especially on how the youth can become leaders on farm and off farm. In the Netherlands, young people are very interested (in agriculture) because (they) are able to make connections between agriculture and information technology (IT). What about the situation of youth in the ASEAN region? Perhaps, we need to map in each country and among countries about our young people so that based on these, we can come up with solutions. (Note: There was an earlier point raised where the consensus was reduced enrollment of students in most ASEAN universities in agriculture degree programs).

Mr. Pham Quang Minh: We have programs to promote to the young generation involved in the agricultural sector. For example, IRI is a program for food security; we also work with universities to promote biodiversity. For IGZ we have six consultants where each one has a focus, such as on crops, forestry, etc. Member states of ASEAN also report on the 20 key performance indicators (KPI).

Ms. Natalia Derodofa: I mentioned that we have an ASEAN youth environment program. I had asked students what they can say about ASEAN. From five ASEAN member countries, most of their answers were only “uhmmm”. We have programs to develop awareness about ASEAN, targeting the young generation. For example, we have a climate change simulation, where a student group assumes to be a

developed country and another group assumes to be a developing country. Then they discuss important matters on climate change, as well as, how related problems can be resolved. Actually, we need more people to work closely with universities for "green higher education programs".

- **SESSION 2 - National Country Reports/Technical Presentations** (on the Status of Higher Agriculture Education, Research and Extension). Preliminary Results: "Mapping and Assessment of Food and Agriculture Teaching, Learning, Research and Extension in HEIs and Research Organizations" (including SWOT analysis).

  Moderator: **Dr. Asdi Agustar** - SEARCA Alumnus and Former Vice Rector for Finance and Management, Andalas University, Indonesia

  Presentors: Cambodia. **Dr. Borarin Buntong** - Director, Division of Research and Extension, Royal University of Agriculture (RUA), Phnom Penh

  Indonesia: **Dr. Siti Amanah** - Chairperson, Department of Communication and Community Development Sciences, Faculty of Human Ecology, Bogor Agricultural University (IPB), Bogor

  Laos: **Dr. Saythong Vilayvong** - Adviser, Office of Research and Services and President, National University of Laos (NUOL)

  Malaysia: **Dr. Norsida Man** - Associate Professor, Department of Agriculture Technology, Faculty of Agriculture, Universiti Putra Malaysia (UPM)

(Photo by Zacyl Rivera-Jalotjot)

- For Cambodia**, Dr. Buntong** presented his report on **"Cambodian Agricultural Research, Extension and Higher Education".** Cambodia has 15 M population but in general, Dr. Buntong explained that there were only 30% agricultural households reported to have used of the extension services provided by their government. The agriculture sector remains an important contributor to their GDP (20-30%) but its contribution has decreased. In 2015, they spent more than 100 M USD on importation of vegetables. He pointed out however, that 60 percent of rural poverty reduction was attributable to agriculture, which affected five million laborers, or 49% of the total working force.

  In the area of Agricultural Research & Extension, the International Fund for Agricultural Development (IFAD) plays an important role, as well as, many NGOs on extension services. However, agricultural extension is undermanned and underfunded, although they have major support from (external?) funding donors. There is little use of ICT in extension projects. Cambodia has 121 HEIs (48 are public HEIs) with many restrictions because these are managed by the central government through the supervision of 16 different ministries. This number had increased from merely 10 in 1990s. There are less than1 M students enrolled in HEIs (only 220,000). Most of the student enrollment is in business administration (47%) and only few (4%) have enrolled in agriculture-related fields at eight key universities or colleges that have programs in agriculture. There are about 10,000 farmers in Cambodia and much less agricultural researchers. There are many challenges in agri-extension and some farmers have expressed their desire to "escape" agriculture. Further, there are no agro-

ecological researches being reported although there is a Center for Agricultural and Environmental Studies, as well as, a Food Research and Development Center. There should be synergy among HEIs in promoting the agriculture sector. There should be other programs i.e. specialized fields in agriculture.

Dr. Buntong recommended the following: (1) develop a road map, or guidelines in agricultural research and extension, particularly for HEIs; (2) strengthen international collaboration and implementation of joint research projects; (3) allocate or invest more funds for physical facilities in scientific research; and (4) seek for policies at the level of the RGC to attract (enforce) more implementation and resource allocation.

- For Indonesia, **Dr. Amanah** presented her report on entitled **"Mapping and Assessment of Agricultural Education towards Food Security and Sustainability: IPB".** Indonesia has 34 provinces, 508 districts/cities, 6694 sub-districts; and 77465 villages. Indonesia has more than 13000 islands with more than 265 M population as of December 2017, which is 3.5% of the world population. However, the country still has problems in food loss and wastage, sustainable agriculture (water and land), and nutritional challenges. There are 1773 agriculture programs in Indonesia. Based on the Food Sustainability Index, there is an increased number of programs in universities in Indonesia. Dr. Amanah showed a map of a brief profile of seven state universities that play key roles in agriculture. She highlighted the faculty and departments at IPB (or Bogor Agriculture University) that are involved in agriculture, as well as, the job profile of their (undergraduate) alumni. She also reported that IPB (with 28,884 students in 2016) has a teaching farm for organic agriculture that is not only limited to those in the university but also in the country in general. IPB also has a fishery and marine science field stations, and educational forests where some students work at the World AgroForestry Center (ICRAF). It is also a green campus and is 29th in world ranking. It has electrical cars in campus that ferry students and employees. It also encourages the use of bicycles in campus instead of motorized vehicles. IPB has university farm schools such as the Horticulture Teaching Farm and the Animal Science Teaching Farm. It develops new crop varieties, has 23 research centers, a Green TV (station) and an Agri FM (radio station). Nonetheless, there is still reduced student interest in agriculture.

IPB also has many international collaborations and conducts summer course programs including 12 additional summer courses in 2017. IPB is a member of UNTA or the University Network for Tropical Agriculture. The Indonesian extension system in general is a collaboration among the MoA, MoFor, and MMAF. There had been a (regular) "communication forum" among the government, universities, researchers, extension workers, private companies, stated-owned enterprises, NGOs, community leaders, farmer groups, and associations of farmer groups. The forum was a venue to discuss problems of farmers and the results of farmers' programs. However, starting early 2017, the forum was discontinued because of change(s) in government policies.

Dr. Amanah made several conclusions. First, any (on-going or future) curriculum development should address the current needs of farmers and related communities. Second, the learning approaches should be able to equip the students with competence to address current and future challenges in agriculture (e.g. land use changes, efficient use of resources, information and technology management, and a borderless society). Third, student and faculty exchanges (academic mobility) among ASEAN countries are needed to increase connectivity, cooperation and collaboration). Fourth, there is a need to strengthen extension organizations after the restructuring of the agricultural extension organization following the implementation of Law 32/2014. Fifth, there must be strengthened cooperation under the umbrella of ASEAN Cooperation with support from regional, international and global institutions that can increase the benefits of research and actions towards ASEAN food security and sustainability.

- For Laos, **Dr. Vilayvong** reported on the **"Roles of Universities in Promoting Agriculture and Food System Programs in Laos".** Laos has about 6.7 M people and has five public universities funded by the government. One of the universities that concerns itself on agriculture is the National University of Laos (NUoL), the first university established in 1996. The national university has 12 faculties and 6 centers, and catered to 21,535 students in 2016. However, student enrollment had decreased by almost 50% in NUoL because the government had developed new universities. The NUoL Faculty of Agriculture has three departments: Agronomy & Plant Protection, Livestock & Fishery (including Veterinary Science), and Rural Economics & Food Technology. There

is an MS program in Sustainable Agricultural Resources and Management taught in modules (as group courses). It involves a week of farm practice.

Dr. Vilayvong explained their SWOT analysis for teaching programs in Agricultural Economics & Food System. For strengths: (1) they have human resources for teaching and research, (2) they have teaching and learning programs, (3) they have laboratory facilities and experimental farms, and (4) they have a clear strategy for becoming an "environmental university". For opportunities: (1) they need improve their teaching programs due to the rapid economic growth of at least 7%, (2) they need to have more research on increasing crop yields per area planted, and (3) they need improvement of their domestic agricultural marketing system and with neighboring countries. For weaknesses: teaching their students about agricultural economics and food systems does not cover the real picture of commercialization, ICT, and climate change. For threats: (1) the functions of the teaching staff: 80% to 100% teaching of students whereas, 20% to 0% for research and administration; (2) research funds for agricultural research and food programs are limited; and (3) the student enrollment is steadily decreasing. Nonetheless, he concluded that Laos has a very high potential for sustainable agriculture but they efficient human resources and more/better research.

- For Malaysia, **Dr. Norsida Man** presented her report about **"Higher Agriculture Education, Research and Extension (ASEAN-HAERE) for Food Security and Sustainability in Malaysia".** She shared that many Malaysian higher educational institutions (both public and private) are involved in imparting agriculture-related education, conducting research, supervising graduate and post graduate students, writing and publishing articles, and transforming communities including farming communities. However, extension and rural advisory services for food security and sustainability by universities are rare.

  Dr. Man highlighted some of the Malaysian higher educational institutions (18 universities) that are involved in food science and sustainability-related educational programs. The Universiti Putra Malaysia (UPM) is one of the national agricultural universities that is most active in various farms, involved in farmer and national development activities at national level through teaching, research, training and extension activities. UPM has nine departments involved

in teaching, training, research and extension activities. However, only a limited number of educational institutions are offering degrees and courses in food security and sustainability. UPM has MS in Food Security and Climate Change and Masters of Food Safety and Quality Assurance. Their Edu Park Programme is another UPM milestone that was established and developed to promote food security and sustainability.

Dr. Norsida recommended the following: (1) although many higher educational institutions are offering various programs less attention was paid on degrees and courses pertaining to food security and sustainability, (2) there is a need to revise and incorporate new courses into agricultural curricula and other schemes of studies, (3) research focus on various aspects of the subject should be covered by the universities, (4) MoHE may encourage public and private sectors to initiate relevant programs, (5) research budget should be increased to carry out more empirical studies, (6) Extension and Rural Advisory Services (RAS) should be linked with stakeholders to address food insecurity issues, and (7) intra- and inter-institutional collaboration and facilitation may be developed.

- **Question and Comments:**

Dr. Wayne Nelles: It is very interesting in the last presentation (Malaysia), to learn that there is some increasing demand in agriculture, where in other countries, there seems to be a decline. What is happening in Malaysia and in other countries? About 2U2I, if students are going work in the industry, what kind of criteria are set to make sure that they contribute to sustainable agriculture if they work in plantations. What kind of plantations? Production?

Dr. Norsida Man: UPM has a 2U2I program where 2 years of studies are spent in the university with another 2 years spent doing internship in industry. It also promotes human resources (enrichment) in the plantations. They are aware about (the concern on) sustainability not only in rice but also of plantations, such as pineapple plantations. However, this is still a question – that is, we need to revise our curricula for the matter of food security. The corporations or plantations involved (that accept our students) provide reports to the university whether the set objectives (for student training or internship) were achieved or not. They monitor students and make sure that students learn something from their plantations.

Dr. Borarin Buntong: Student enrollment in my university has decreased because the country has set up new universities. But in totality, student enrollment in the whole country (Cambodia) did not decrease. It is also dependent on how many high school students pass the exams based on university criteria. About 2U2I, we also have dual education programs like ERASMUS.

- **SESSION 3 - National Country Reports/Technical Presentations** (continued)

Moderator: **Dr. Bambang Suwignyo -** SEARCA Alumnus and Head, Department of Nutrition and Feed Science, Faculty of Animal Science, Universitas Gadjah Mada, Thailand

Presentors: **Philippines. Dr. Enrico Supangco** - Professor and Dean, College of Agriculture and Food Science, University of the Philippines Los Baños (UPLB)

Thailand. Dr. Supawan Visetnoi, Lecturer, Chulalongkorn University School of Agricultural Resources (CUSAR), Bangkok

Viet Nam. Dr. Nguyen Thanh Binh - Vice-Head, Department of Agricultural Systems, Mekong Delta Development Research Institute, Can Tho University (MDI-CTU)

(Photo by Zacyl Rivera-Jalotjot)

- For the Philippines, **Dr. Supangco** presented about the **"Policies, Regulations and Programs Promoting Sustainable and Organic Agriculture in the Philippines".** The Philippine policies that promote sustainable agriculture include the Philippine Agenda 21 (PA 21), Agriculture and Fisheries Modernization Act (AFMA) of 1997, Republic Act No. 10068 (Organic Agriculture Act of 2010), and the Department of Agriculture-National Organic Agriculture Program (DA-NOAP) created in 2012. The Organic Agriculture Certification is subsidized by the government and is awarded by third-party certifying bodies accredited by the Bureau of Agriculture and Food Safety.

  Dr. Supangco also explained that there are 16 National Universities and Colleges of Agriculture (NUCAs) in the Philippines. In total, there are 237 HEIs that offer agriculture and agricultural technology baccalaureate programs, and 153 HEIs that offer agriculture programs only.. UP Los Baños (UPLB) established five interdisciplinary studies centers in 2014, Including one for food security in which a sustainable agriculture focus is integrated in the promotion of organic and sustainable agriculture programs. He mentioned that Benguet State University in Northern Luzon, has offered Bachelor of Science in Organic Agriculture (BSOA) as early as 2008. Dr. Supangco said that the principles, concepts and practices of organic and sustainable agriculture areembedded in the various curricular programs of the UPLB College of Agriculture and Food Science (CAFS). The College offers four undergraduate programs (aside from many graduate programs) that include: BS Agriculture, BS Agricultural Biotechnology, BS Agricultural Chemistry and BS Food Technology. There is also a long-term extension program called the National Farmer-Scientist Training Program. CAFS also conducts more than half of the country's total agricultural researches with various areas covered: plant breeding, postharvest handling and primary processing, crop protection, crop production, crop physiology, propagation, food science, animal and dairy sciences, and farming systems. However, he revealed that research is really fund-driven. Lastly, he emphasized that state universities and colleges (SUCs) have roles to train farmers in organic agriculture, and sustainable agriculture is attainable together with government institutions, and international organizations.

- For Thailand, **Dr. Visetnoi** presented her paper on the "**Overview on the Role of Higher Education in Agricultural and Rural Development: The Case of**

Thailand". She started by sharing the meaning of Chulalongkorn University, which is Pillar of the Kingdom. The current population of Thailand is 68 M of which 25% are engaged in the agriculture sector. However, there is a general lack of appropriate knowledge on efficient production and farming. This is a problem because about 40% of Thailand is farmland. There is also a growing shortage of laborers/workers in the agriculture sector. This is a major concern because the agricultural sector is one the main contributors to the country's GDP (9.1% in 2015). The majority of Thai farmers live in rural areas often associated with greater poverty. More than 80% of Thai farmers are aged between 45-50 years or older, where the average is between 40 and 45.

Dr. Visetnoi highlighted that the main social issues in agriculture are reduction in the number of farmers, ageing farmers, poverty and migration, and unsustainable production systems (because of overuse of chemicals, land degradation, and others). She thinks that the decrease in "farmer replacement" especially for those between the age of 15 and 25 is a major problem. Her research discovered that there are few curricula/programs on sustainable agriculture (SA) and organic agriculture (OA). She found that the majority of courses are focused more on conventional and industrialized agriculture (mainstream production), whereas SA and OA are considered only as alternatives and are multi/interdisciplinary that require integrated knowledge.

In Thailand, not all HEIs offer agricultural programs that have extension programs. Based on the SWOT analysis about the roles of the National Research Universities (NRUs) on SA education, Dr. Visetnoi made the following conclusions and recommendations: (1) SA is an ultimate challenge for all levels, (2) higher education (HE) has duty to create and improve human resources at the national level for national development, (3) HEIs, therefore, need to improve networking and collaboration e.g. with government, NGOs, other national HEIs or even between Southeast Asian countries and others, (4) encourage and enhance training for academic staff and students to increase number of experts, (5) increase HE engagement and outreach with communities, and (6) a strong government policy is needed for implementation and support is required to strengthen SA education and research.

Dr. Visetnoi elaborated that universities normally perform their own outreach or area-based AES (agriculture extension services), based on their university

strategies and current projects. This however, is on an '*ad hoc'* basis (i.e. temporary). When a project is finished, it is no longer continued and sustainability is an issue. Institutionalization of such projects is the logical for sustainability. She also presented future recommendations to improve the Agricultural Extension Services System (AESS). First, governments should provide better support or incentives to scholars for sustainable agriculture and organic agriculture research. Second, increase the number of experts and skilled officials to provide sufficient knowledge and be able to train and advise farmers. Third, create real-world channels and approaches that incentivize cooperation between researchers and governmental agencies at all levels, to meet the real-world needs of farmers. Fourth, a system needs to be set up that would facilitate research and funding that could allow more interaction between HEIs and government agencies. Fifth, promote the establishment of more training programs in universities to enhance access by small farmers to have adequate, science-based education and training. Sixth, provide more funding and budget for teaching and research on organic agriculture and/or agro-ecology. Lastly, require more systemic research and adequate documentation or programs, courses, teaching, faculty, as well as, address the problem of student recruitment and reduced enrollment.

- For Viet Nam, **Dr. Binh** presented about the **"Current Status of Higher Agriculture, Education, Research and Extension for Food Security and Sustainability in Viet Nam".** Their country has the same land area as Malaysia (GSO, 2017). Its rural population is estimated at 65%. GDP per capita is about USD 2109 and the share/contribution of agriculture is about 17%. Dr. Binh explained that if you depend on agriculture, your GDP is relatively low compared to other countries. The current agricultural practices cannot make people rich. However, agriculture is very important in the Mekong Delta. Viet Nam has 235 universities (65 private, 170 public), 25 of these are strongly in agriculture programs (MOET, 2017). However, they have minimal programs on agricultural extension, which is decentralized i.e. from central government to local government. Aside from universities, companies, mass media, mass (or peoples) organizations, other GOs, NGOs are independently doing extension to farmers' clubs or organizations. Viet Nam's rice development grew from 10 million tons (1976) to 45 million tons (2014). After 1988, it became the highest exporter of rice because its yields increased better than any country in the world. Dr. Binh invited everyone to rethink about the current agricultural policies and

the role(s) of HEIs on organic/sustainable agriculture especially that in general, all over ASEAN, the area for organic agriculture has increased. The strengths of higher agriculture, education, research and extension (HAERE) in Vietnam are the experienced HEIs that have well-structured agricultural extension systems, and integrated farming systems. The opportunities provided however, are the higher demands, national and international markets, and more attention and support from the government and external institutions. The weaknesses are the overuse of chemicals, poor collaboration, and small-scale farming but high production costs. The threats are migration of youths, climate change, and (excessive) water use by the upper Mekong countries. In conclusion, Dr. Binh emphasized the need to do more research on agro-ecological farming and better linkages among the four houses (farmers, HEI-extension and scientists, businesspeople, and government) to draft and establish an appropriate legal framework and to have (better) financial support.

- **Question and Comments:**

Dr. Jesus Fernandez: My questions are very general. Do we have tracer studies on agricultural graduates? What are the trends in agricultural studies and profession, especially those who have no background in agriculture? This is an observation, that there are many young people involved in agriculture but who did not graduate with agricultural degrees. They apparently can learn many things/stuff about agriculture from the Internet. So, to what extent should they really be engaged in (formal) agriculture programs? Do we have data that compare this group with those who formally graduated with agricultural degrees?

Dr. Joy Jamago: From the reports, Thailand and Viet Nam lack expertise in especially in agricultural extension. Perhaps, aside from student mobility (e.g. ASEAN International Mobility of Students or AIMS), we can share experts through similar mobility programs for faculty, scientists and researchers, even extension experts. This can be done annually or on a per semester basis. It could be one good investment of the ASEAN governments. FAO used to banner food security (FS) only in their programs but recently included nutrition security as a goal. So, now it is food and nutrition security (FNS).. Currently, FS is often very focused only on rice. It is understandable because it is the major staple among Asians. However, we should include other staples and other crops if we aim for food and nutrition security.

Dr. Wayne Nelles: How is the accessibility or availability of funding to do research related to agriculture education? Perhaps, we need to do something like comparative analysis among countries (member states of ASEAN) dedicated for this specific purpose. We also need an assessment of the kind of significant impact of funding on programs. Another question is how can we scale-up research funding and capacity-building for educational institutions on organic or sustainable agriculture?

Dr. Enrico Supangco: We found out that most of our graduates enter the (agriculture) industry. They are usually in marketing, research and/or teaching, or in other areas of agriculture. There was a FAO-organized meeting in Thailand regarding the combined goals of food and nutrition security, but not much detail on how much to produce. In the end people, human resources, are the most important to propel whatever goals that are set. I think we have legislators and champions for agriculture. For the Philippine case, funding for research largely comes from the Department of Agriculture and allied agencies, on a proposal basis.

Dr. Nguyen Thanh Binh: The government tries to reform or restructure the government body by reducing the staff in departments. This is one of the reasons for the lack of programs (especially extension) in agriculture. Another reason is that agriculture does not seem to benefit other sectors. Many students who graduated from agricultural programs work for fertilizer companies, pesticide companies, or chemical companies. They push/force farmers to use more inputs and synthetic fertilizers. I agree that food security is not only about rice, but because rice is the major food crop in Vietnam, many agricultural policies are first policies on rice. Another concern is that we also want to reduce production costs but it is difficult because farmers are already familiar with the current technology (which is conventional farming). Moreover, rice is also very easy to sell. For other agricultural products, we should find new markets to sell these products.

Dwi Arrisandi: When I was involved in the urban communities in Bandung, Indonesia, we worked with many people who came from multidisciplinary backgrounds. There are architects and different agricultural graduates who can help to change the image of agriculture among the urban youth. Teamwork among people from different disciplines (i.e. non-agricultural and agricultural graduates) can be very helpful to develop sustainable agriculture programs.

As a wrap-up of Day 1, it was emphasized (by Dr. Nelles) that the group next needed to identify major issues and concerns, propose concrete plans and substantive recommendations for the next day.

Day 2. Thursday | 7 December 2017

- **SESSION 4. Regional Organizations or NGOs on HAERE Priorities, Perspectives Plans and Partnership in ASEAN-SEAMEO Region**

Moderator: **Dr. Asdi Agustar -** SEARCA Alumnus, Andalas University, Indonesia

Panelists: **Dr. Jesus Fernandez,** Deputy Director, SEAMEO-Southeast Asian Regional Centre for Tropical Biology (BIOTROP), Bogor, Indonesia

Dr. Muchtar Mansyur, Director, SEAMEO Regional Center for Food and Nutrition (SEAMEO-RECFON), Jakarta, Indonesia

Dr. Maria Cristeta N. Cuaresma, Program Head, Graduate Education and Institutional Development Department, SEAMEO-SEARCA, Regional Headquarters, Los Baños, Philippines

Dr. Filma Calalo, Asia Pacific Island Rural Advisory Services (APIRAS) and University of the Philippines at Los Baños (UPLB), Laguna, Philippines

Dr. Siti Amanah, Chairperson, New Southeast Asia Rural Advisory Services (SEARAS) Network

- **Dr. Fernandez** talked about the **"SEAMEO-BIOTROP Priorities, Programs Partnerships on HAERE for Food Security and Sustainability in Southeast Asia".** He began by explaining about the SEAMEO-BIOTROP Profile. It is the Southeast Asian Regional Centre for Tropical Agriculture. Like most other SEAMEO centers, it has four mandates; research, capacity building, information exchange, and community development. BIOTROP's vision is to be "a leading center in enriching and promoting the real values of tropical biology in Southeast Asia". Its mission is "to provide scientific knowledge and capacity building in conserving and managing tropical biology sustainably for the well-being of communities and the environment of Southeast Asia." It has three program thrusts: (1) Restoration of Degraded Ecosystems/Landscapes, (2) Sustainable Management of Intensively Used Ecosystems/ Landscapes, and (3) Conservation and Sustainable Use of Unique Ecosystems/ Landscapes of High Biodiversity.

  Dr. Fernandez also explained the Centre's Programs & Partnerships on HAERE for Food Security and Sustainability in Southeast Asia. There are 12: In-house Research Program, PhD Thesis Grants Program, Partnership Research Program, Students Internship Program, Tissue Culture and Seedling Propagation Program, Transforming Degraded Areas into Productive Landscape Program, SEAMEO STAR Village Program, School Gardening for Improving Students' Literacy, Nutrition and Entrepreneurship Program, Action Research Grants for School Teachers Program, Urban Farming Training Program for Special Education and Vocational Schools Sister-School Program on Mangrove Education and Conservation in Indonesia and Thailand. BIOTROP also develops new programs that will be launched in 2018. Its current country partners since 2015 are Cambodia, Japan, Malaysia, Indonesia, Philippines, and Vietnam. Dr.

Fernandez emphasized that food security is a major focus of their center's four mandates through the sustainable use and management of existing landscapes and/or ecosystems.

- **Dr. Mansyur's** presentation was entitled **"SEAMEO Regional Centre for Food and Nutrition (RECFON) Policies, Priorities and Plan."** SEAMEO RECFON is part of the SEAMEO centers network with a vision to "be the centre of excellence in human resource development in the area of food and nutrition in Southeast Asia". The Centre's drivers are global agenda on development goals, nutrition targets and regional commitment through education. Two of their priority programs are NGTS (Nutrition Goes to School) which is school-based and ECCNE (Early Childhood Care, Nutrition & Education) which is community-based.

  The NGTS beneficiaries include 17 provinces, 783 schools from all levels, 1816 teachers and school principals, and 1489 students from all levels. Their training and education include six components: (1) Roll-out and Tailor-made Training, (2) Post Graduate Training, (3) Southeast Asia Nutrition Leadership Programme (SEA-NLP), (4) Degree Programmes, (5) Seminars & Workshops, and (6) Online Lectures on Recent Updates on Food and Nutrition. The Centre has strong partnerships for local-based food recommendations in Indonesia, with different stakeholders that include the following: Nutrition Academy (Poltekkes Gizi), Province/District Health Office, Community and Local Government, and Partnership with ASEAN Countries (e.g. Myanmar, Lao-PDR, Philippines and Cambodia). At present, over 3000 alumni from nutrition, health, agriculture, education and other related disciplines from SEA countries and beyond have been exposed to and have benefited the Centre's programmes and activities.

  Dr. Cuaresma's topic was simply entitled **"SEARCA on HAERE".** She started by sharing that everything that SEARCA does is relevant for food security and sustainable agriculture since its mandate is to promote agricultural and rural development in the region. It has three core programs: graduate education and institutional development, research and development, and knowledge management. In 1989 SEARCA initiated the establishment of the Southeast Asian University Consortium (UC) which aims to (i) provide highly trained personnel in agricultural and natural resources, (ii) promote mutually beneficial cooperation and optimize utilization of scarce resources (iii) develop strong and

dynamic linkages through collaborative researches and exchange programs.. The five UC regular members are Institut Pertanian Bogor (IPB) of Indonesia, Universitas Gadjah Mada (UGM) of Indonesia, Universiti Putra Malaysia (UPM), University of the Philippines Los Baños (UPLB), and Kasetsart University (KU) of Thailand. The UC offers student and faculty grants to do research and present papers at conferences, and take courses for credit, or serve as a visiting professor in a consortium member university. Dr. Cuaresma also explained about other programs that support education on food security and sustainable agriculture, such as the annual UC Summer School, annual UC Graduate Forum, UC Collaborative Projects under the Umbrella Program on Food and Nutrition Security for Southeast Asia (FANSSEA), activities supported by the Food Security Center (FSC) of Hohenheim University, and the Institutional Development Assistance (IDA) Program. SEARCA sources additional funding for HAERE from a multitude of partner organizations such as DAAD from Germany and IDRC from Canada for the scholarships or the likes of IFAD or Asian Development Bank (ADB) for the research. Dr. Cuaresma informed everyone of their newly launched MS in Food Security and Climate Change degree program jointly offered by the UC members with partial funding from the European Union ERASMUS + program under the Capacity Building in Higher Education component. Of recent count, SEARCA has had a total 1649 scholars (962 MS and 687 PhD) and many of them have assumed leadership positions in their own institutions after graduation. SEARCA considers these scholarship alumni as among its formidable partners in its work in promoting agricultural and rural development.

- **Dr. Calalo**'s topic was entitled **"A Regional Partner in Strengthening Extension and Rural Advisory Services Programs in Higher Agriculture Education for Food Security and Sustainability in Southeast Asia".** The Asia-Pacific Island Rural Advisory Services (APIRAS) is part of a global forum for rural advisory services (GFRAS). Its three core activities are networking (regional KM Hub), policy advocacy (new extension), and capacity building (new extensionist). Hence, it also made sure to be accessible through its website (www.apiras.org) and equally active on social media (Facebook and Twitter). She devoted adequate time to explain about the concept of the "New Extensionist".

  The "New Extensionist" is a global view of extension and advisory services (EAS) that reinvents and clearly articulates the role of EAS in the rapidly-changing rural

context. This global view goes beyond strengthening individual skills to look at organizations and systems and their capacities. Extension work includes actors from public, private and civil society who support the grassroots in many ways. APIRAS has a program called 'Consortium on Extension Education and Training'. It is a platform for universities and other training institutions, researchers in the field of extension, and/or service providers to various clientele along the agriculture value chain, and those in need of various forms of support in rural livelihoods and well-being. Dr. Calalo informed everyone that there are downloadable learning modules from their website such as on agricultural entrepreneurship. The six sub-regional networks of APIRAS are South Asia, Southeast Asia, Central Asia, Pacific Islands, East Asia, and West Asia.

- **Dr. Amanah**'s talk was entitled **"Southeast Asia Rural Advisory Services (SEARAS) Sub-regional Network: New Formation".** SEARAS has four objectives: (1) align with APIRAS/GFRAS missions, (2) advocacy to policy-makers to meet rural community needs, (3) strengthen RAS service as a system (innovations), and (4) share and exchange learning and experiences amongst members. She also mentioned the need for sub-regional groups because of the uniqueness of rural communities, geographical characteristics, as well as, potency and challenges in sub-regions. There are also gaps in development amongst the SEA communities that have led those who are concerned to advocate for agricultural development, rural development, training and education, research for development, and youth engagement in agriculture in order to meet and identify the needs for a platform to work together for SEARAS.

  Dr. Amanah expressed her hope that SEARAS will be able to influence policy-makers and relevant stakeholders in order to (i) improve RAS and transform rural services towards community welfare in a sustainable way; (ii) conduct joined programs of RAS in SEA for concerns on food, agricultural innovation, capacity development, training, research and education; (iii) improve the quality of agricultural products to contribute innovations on RAS/Extension Services considering various issues and challenges in SEA (link and match); and (iv) increase connectivity and network amongst those who share concerns in RAS.

- **SESSION 5. International Organizations and Networks on HAERE**

Moderator: **Dr. Joy M. Jamago,** SEARCA Alumna and Professor, Department of Agronomy and Plant Breeding, Central Mindanao University, Philippines

Panelists: **Dr. James Roshetko,** Agroforestry System Scientist and Leader of Trees, Agroforestry Management and Marketing Unit, World Agroforestry Center (or ICRAF), Bogor, Indonesia

Ms. Ita Sualia, representative of **Mr. Masakazu Ichimura,** Head, Centre for Alleviation of Poverty through Sustainable Agriculture (CAPSA), UN Economic and Social Commission for Asia and Pacific (UNESCAP), Bogor, Indonesia

Dr. Daniel Ruiz de Garibay, Regional Coordinator, Eastern Europe and Asia-Pacific, World Rural Forum (WRF), and affiliated with Universitas Indonesia

(L-R) Dr. Joy Jamago, Dr. Nathaniel Alibuyog (SEARCA Senior Alumnus), Dr. James Roshetko and Dr. Daniel Garibay before the start of Session 5. (Photo by Zacyl Rivera-Jalotjot)

- Dr. Roshetko presented his topic entitled **"Agroforestry Education, Research and Extension for Food Security and Sustainability".** He explained about ICRAF's vision, which is rural transformation in the developing world. Smallholder households increase their use of trees in agricultural landscapes to

improve food security, nutrition, income, health, shelter, social cohesion, energy resources and environmental sustainability. He emphasized that ICRAF scientists are working closely with national and local partners across the ASEAN region to realize their vision. One of their goals is to educate people that resources to become sustainable need to be managed well, and that everyone needs to be better caretakers of our forest resources.

Often, smallholders have small farms and in many cases, they cannot expand their area. They have limited access to finances, technical knowledge and assistance, as well as, market information. However, one glaring problem is inadequacy of extension workers for farmers. Based on these problems, ICRAF gives trainings for successful tree-based agroforestry systems, such as nurseries and quality germplasm, tree management skills, as well as, market information and links. ICRAF has been doing Agroforestry Education, Research and Extension with government partners, universities, NGOs, conservation organizations, communities, farmers, and private sector in the last five years. They have also involved students of various levels (PhD, MSc, BSc and high school). ICRAF also has some collaboration with ASEAN for the following programs: Agroforestry Options for ASEAN, Policy Briefs Agroforestry Development Guidelines for ASEAN, and Agroforestry Training Manual and Field Manual.

- **Ms. Sualia** presented the topic **"Integrated Research-Extension through Regional Networking".** Her organization the Centre for Alleviation of Poverty through Sustainable Agriculture (CASPA) is a UN body mandated as the regional knowledge hub on sustainable agriculture, food security and rural development in Asia Pacific. Its mission is to improve capacity of member states to formulate and implement policies that promote sustainable agriculture, enhance food security and encourage inclusive rural development towards the overarching goal of poverty alleviation. The three action areas of CAPSA are (i) policy research and advocacy, (ii) capacity building and training, and (iii) knowledge sharing and networking. Ms. Sualia explained about the key challenges for Asia-Pacific Agriculture that in general, these are demographic challenges, climate change and natural disaster, and threats to natural resources and health. The latter includes water shortage, pollution, land degradation, and changing food consumption patterns.

These global challenges require small farmers to adopt the philosophy and practices of sustainable agriculture through research and extension, as well as, to shift from input-intensive to knowledge-intensive agriculture. They also focus more on capacity building, knowledge exchange to address the needs of small farmer, including enhancing linkage between research and extension. Currently however, the status of research-extension linkage showed that there are too few extension workers, government-led systems, budget deficits, and gap in the capacities of extension agents. Nonetheless, there are also opportunities such as, intensified sustainable production, ICT as knowledge-brokers between researchers and farmers, as well as, networking and global initiatives.

She also elaborated on their "Action Framework for Strengthening Research-Extension Integration" that include many commendable approaches: (1) establishing regional networks for extension services; (2) adapting to a new research-extension environment; (3) creating space for research-extension interface; (4) enhancing quality of extension services; (5) addressing the needs of smallholder farmers, women, and youth; (6) mobilizing resources and establishing stakeholder partnerships; (7) fostering enabling policy initiatives, and (8) documenting evidence.

Finally, some of CAPSA's key activities based on their action areas are the Myanmar Dry Zone Project (LIFT) and SATNET Asia-Pacific. CAPSA recognizes and emphasizes that the important roles of "International Cooperation and Regional Networking" are to: (1) address common risks and challenges that are possibly embedded in making use of trans boundary resources, (2) promote active commitment to regional interactions, (3) perform advocacy with national organizations to support extension, (4) Increase opportunity for international cooperation within and beyond the ASEAN region, (5) enhance joint strategies/positions on issues of related interest to ASEAN with international organizations and dialogue partners, (6) promote collaborative research and technology transfer in products and Good Agricultural Practices (GAPs), (7) provide a platform to collaborate with relevant institutions and experts, (8) serve as a mechanism for knowledge-sharing and as an advocacy channel, and (9) encourage involvement of government, international and regional organizations, NGOs and civil society organizations and private sector actors in extension services.

- **Dr. Garibay** presented his topic on the **"World Rural Forum (WRF)."** It is a plural global network established in 1998 in Spain. It works in favor of family farming and sustainable rural development (aligned with SDG2). WRF members are farmers' organizations, farmers' federations (e.g. AFA and PIFON), rural development organizations (Asia DHRRA), agriculture cooperatives, and research centers (e.g. CIRAD).

  The overall objective of WRF is to strengthen the nexus between agricultural research and family farming (FF) from a larger perspective and with a holistic vision based on the three pillars of sustainability. The main agenda of WRF are to promote connections between agricultural innovation centers and family farming organizations; and to build a more coherent and effective agricultural, fishing, and forestry innovation system that meets the needs of the target subjects. To achieve these, Dr. Garibay proposed that famers and their organizations must participate from the beginning, at the design (of programs and activities), data collection, review of results and dissemination stages, as well as, be part of the boards of agricultural research centers. Lastly, he shared that WRF is lobbying to the UN for the declaration of the "Family Farming Decade".

- **Question and Comments**

Ms. Epsi Euriga: I am interested on the issue on family farming mentioned in the presentation of Dr. Garibay. In my country, the Ministry of Agriculture Republic of Indonesia has concerns about farmer regeneration. We already gave scholarships to children of farmers to enroll in agricultural extension colleges organized by the Ministry. We are very concerned about our young people who are not interested in agriculture. We hoped that with this program, young people would become more interested in agriculture. Does the World Rural Forum have a particular program on regenerating farmers?

Dr. Daniel Ruiz de Garibay: We already conducted research on family farming for this issue. In general terms, the social problem is that farmers transfer land to their kids before they pass away. Then the kids have other visions for land use but not for farming. Also, what is ironic is that many parents did not want their kids to become farmers. The general perception about farming as a profession is not attractive. If

you want, I can share with you the data on the global research of the reality in agriculture.

Dr. James Roshetko: We (also) had an experience with farmers in Sulawesi. There were 20 farmers who were mostly young men. Two of them were women. Their degrees are not all in agriculture, but something like agribusiness, but they live in rural areas. We gave them training to do farming and they were keen to do this. They just needed training, education, and recognition. They have proven that they can succeed.

Dr. Wayne Nelles: In terms of research, with ICRAF as one of the members of the Consultative Group on Agricultural Research (CGIAR), a network of research centers specialized in different areas: rice (IRRI), potatoes (CIP), fisheries and other commodities or themes. However, the point here is how to find funding to better support research for developing countries, also for education and training, and support for local governments. The current available resources are small compared to need. In the future, we should involve more of the CGIAR in these discussions, especially on the issue of research for development. The Global Forum on Agriculture Research (GFAR) also does some important work to build on linking education, research and extension.

Dr. Muchtar Mansyur: Whether we can do collaboration, I would like to know of your programs and activities about the nutrition of farming families. SEAMEO conducts partnerships. We go to schools because children are the agents of change. They are also children of the farmers. What we often see is that mostly, the decision maker is the father, whereas the mother serves the father and she cannot choose the food. Maybe we can have collaboration on this particular concern among (some) families of farmers on this issue (of nutrition security).

Ms. Ita Sualia: In general, farmers usually sell their best harvest that they get (from their farms) but for their family to consume. (This mindset is still present in every country.) CAPSA also has concerns about this issue. We try to see what can be done (to feed the population) and also how to educate the farming families.

Dr. James Roshetko: I think it is very interesting that (nutrition insecurity) is not only about undernourishment but also over-nourishment. Some of the younger people in Indonesia who are less than 15 years old are getting overweight. Promoting an

indigenous vegetables education program and promoting this through the schools, i.e. the use of indigenous vegetables, I think, will be good.

- **DISCUSSION – Priorities and Strategies for Planning, Future Projects and Funding-on HAERE in the AWPE.**

This last session of the workshop before closing was primarily a brainstorming about key priorities, plans and recommendations from participants of the workshop. They reflected on priorities and practical ideas for what ASEAN might consider with respect to next steps or designing and implementing specific projects. Below is the collective output of participants on current gaps in agricultural higher education, research and extension, and the proposed programs/activities/policies to address each gap. Please NOTE that the three columns of the table are not necessarily connected. Each theme of suggested project ideas is independent.

No.	Education	Research	Extension
1	Faculty or expert (in agriculture) mobility program, as well as, having a database of these experts in the ASEAN region	Distinguishing SA (sustainable agriculture) from OA (organic agriculture) or GA (green agriculture); having a common understanding about SA	Involvement of rural youth in farming (e.g. PhilRice [or the Philippine Rice Research Institute] project using ICT loaded with agriculture-related information that is accessible to children
2	Curriculum standards & qualification frameworks (i.e. for Internationalizing Agriculture Curriculum/Curricula across ASEAN member countries, taking the example of Mutual Agreements in ASEAN for	Sustainable and appropriate farming systems in rural communities (considering community interest/motivation , knowledge level and availability of	Agriculture immersion in communities for the youth; students to address agriculture-related problems of villages

	some professions; need to make ASEAN agriculture curricula comparable). Note: ASEAN already formulated **quality assurance standards but has not yet done this in agricultural education**	resources especially land)	
No.	**Education**	**Research**	**Extension**
3	Credit system	Risk assessment (improper use of chemicals by farmers, etc.)	Involving parents in school gardens
4	Institutionalizing SA as a program of HEIs	Strengthening the link between research and extension	Agri-based creative industries for the youth
5	Qualifications Framework on TVET in Agriculture (workshop to finalize the proposal in January 2018)	Upscaling research results	ICT/Mobile phone applications in agriculture
6	Online learning/MOOCs and establishing quality assurance on online materials in agriculture	Reducing production cost in agriculture	Establishing agro-tourism sites for the youth either in public places or in universities ; Universities as agro-learning parks
7	Introducing/incorporating agriculture in high school curricula (e.g. Agri"cool"ture programs in the Philippines)	Promoting climate adaptive agricultural research	Development of a SEA-wide handbook on participatory research in agriculture

8	How to make agriculture as a profession of choice among the ASEAN youth	Crop and livestock insurance (policy); avoiding "debt traps"	Community farming entrepreneurship by project approach among students
No.	**Education**	**Research**	**Extension**
9		Financing mechanisms for small farmers (policy)	Establishing regional information or knowledge platforms/specialized databases in agriculture
10			International mobility programs of agricultural extensionists (in ASEAN)
11			Documentation of success stories in extension and sharing these across the region; perhaps a book on the "MVPS" in agriculture

Selected Issue Themes for consideration in Future Projects Raised in Final Plenary Discussion (without attribution):

1. It would be Useful to align with the ASEAN mechanism and SEAMEO 7 Priority Areas in ASEAN to different sectors and working groups, and how to complement with one another;
2. Activities could be anchored with the ASEAN initiative(s) considering the available expertise and funding support;
3. A stand-alone initiative is acceptable but not necessarily a group consensus;
4. Is SA the same with OA? This is in consideration with the high expense incurred for certification of organic farms. Perhaps using the term "green agriculture" could be sustainable but not expensive;
5. On Rural youth and farming - How can we change the mindsets of the young

people (and even aging farmers), take the example of YPARD – Young Professionals for Agricultural Development - how about the concept of community farming?

6. One irony is that many universities or HEIs are producing agriculture professionals but only few agriculture practitioners; need for new business models for agricultural universities;
7. Perceptions on farming as a low or inferior profession and less profitable thus, it has less funding opportunities;
8. There was agreement on how to proceed with the suggestions given above, to translate these ideas into proposals for funding;
9. Identifying possible funding sources to carry out ideas listed above; and
10. It would be useful to do comparative agriculture studies among different countries in the region and learn from others' experiences
11. The reputation of the agricultural profession (i.e. negative perception about agriculture) is a concern. What could be possible solutions (based on the ASEAN experience in Technical Vocational Education and Training - TVET)?

- **WRAP-UP/NEXT STEPS IN AWPE 2017-2020 PLANNING AND OUTPUTS**

Ideas Very Relevant to ASEAN:

a. **Strengthen the advocacy**: which country in the world treats agriculture as a "sexy" profession? How to change the mindset of many people of the notion that "farmers are poor"?
b. **Provide opportunities or scholarships for agricultural education**: which countries/organizations offer scholarships for agricultural education?
c. **On Career-pathing for TVET**: what can be practical actions?

Next Steps:

1. Report on the event for submission to ASEAN member states. SEARCA can provide funding for the workshops, i.e. for two or three project plans. The workshop outputs can be incorporated or integrated into the next five year project plans.
2. The ASEAN Secretariat will request SEARCA to coordinate the Philippine side and Dr. Wayne for the Thailand side to follow up the suggestions from this event (especially the publication of outputs).

3. Organize a regional forum next year (to be hosted either by SEARCA or Chulalongkorn University) to discuss follow-up actions.
4. Identify a proponent for each project (either a university or research institution) and implementing agency(ies).
5. Proposal development could be a collaborative activity between the ASEAN Secretariat and the proponent institution (and making sure that the content is anchored on the ASEAN framework), need for concrete activities.
6. Forming a highly qualified content-experts team (through email groups).

Group photo at the lobby of the ASEAN Secretariat Office after the two-day workshop/policy dialogue.

Lastly, Dr. Nelles sincerely expressed his great appreciation to everyone present, the presentors/panelists/resource persons, sponsors, organizers and co-organizers, but especially SEARCA for sponsoring several experts from the region to join, and the ASEAN Secretariat for hosting the workshop in Jakarta.

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Appendix 1 - Glossary of Main Terms

AEC - ASEAN Economic Community
ADB - Asian Development Bank
AESS - Agriculture Extension Services System
AIMS - ASEAN International Mobility of Students
AMAF - ASEAN Ministers of Agriculture and Forestry
AMME - ASEAN Ministerial Meeting on Environment: (1)
AKECOP - ASEAN-Korea Environmental Cooperation Project
APFP - ASEAN Peatland Forests Project
APIRAS - Asia Pacific Island Rural Advisory Services
APSC - ASEAN Political Security Community
AQRF - ASEAN Qualifications Reference Framework
ASCC - ASEAN Socio-Cultural Community
ASED - ASEAN Education Ministers Meeting
ASPEN - ASEAN Strategic Plan on Environment
AUN - ASEAN University Network
AWPE - ASEAN Work-Plan on Education (AWPE), 2016-2020
BMZ - German Federal Ministry for Economic Cooperation and Development
CAPSA - Centre for Alleviation of Poverty through Sustainable Agriculture,
CLMV (Cambodia, Laos, Myanmar and Viet Nam) group of countries
CGIAR - Consultative Group on Agricultural Research
CUSAR - Chulalongkorn University School of Agricultural Resources
ESD - Education for Sustainable Development
ECCNE - Early Childhood Care, Nutrition & Education)
FAF - Food, Agriculture and Forestry (Sector of ASEAN)
FANSSEA - Umbrella Program on Food and Nutrition Security for Southeast Asia
FNS - Food and Nutrition Security
FSC - Food Security Center University of Hohenheim,
GFAR - Global Forum on Agriculture Research
GFRAS - Global Forum for Rural Advisory Services
HAERE - Higher Agriculture Education, Research and Extension
HEIs – Higher Education Institutions
IAASTD - International Assessment of Agricultural Knowledge, Science and Technology for Development
IAI - Initiative for ASEAN Integration
ICRAF - World AgroForestry Center.

IFAD - International Fund for Agricultural Development
ISARD - Inclusive and Sustainable Agricultural and Rural Development
IPB - Institut Pertanian Bogor
KU - Kasetsart University
MDI-CTU - Mekong Delta Development Research Institute, Can Tho University
NDG - Narrowing the Development Gap
NGTS - Nutrition Goes to School
NRUs - National Research Universities
NUoL - National University of Laos
OHEC - Office of the Higher Education Commission Ministry of Education, Thailand
QA - Quality Assurance
RUA - Royal University of Agriculture
SAFS - Sustainable Agri-Food Systems
SOM-ED - Senior Officials Meeting on ASEAN Education
SDGs - Sustainable Development Goals
SEAMEO-BIOTROP - Southeast Asian Regional Centre for Tropical Agriculture.
SEAMEO RECFON - SEAMEO Regional Centre for Food and Nutrition
SEAMEO-SEARCA - Southeast Asia Ministers of Education Organization, Southeast Asian Regional Center for Graduate Study and Research in Agriculture
SIANI - Swedish International Agricultural Network Initiative
Sida - Swedish International Development Cooperation Agency
SEA - Southeast Asia
SEA-NLP - Southeast Asia Nutrition Leadership Programme
SEARAS - Southeast Asia Rural Advisory Services Network
SEAUC - Southeast Asian University Consortium
TVET - Technical Vocational Education and Training
UNESCAP - UN Economic and Social Commission for Asia and Pacific
UNESCO - United Nations Educational, Scientific and Cultural Organization
UGM - Universitas Gadjah Mada
UPLB - University of the Philippines Los Baños
UPM - Universiti Putra Malaysia
UNTA - University Network for Tropical Agriculture
WRF - World Rural Forum
YPARD – Young Professionals for Agricultural Development

Appendix 2 –AGENDA

ASEAN Technical Meeting and Multi-Stakeholder Policy Dialogue on Higher Agriculture Education, Research and Extension (ASEAN-HAERE) for Food Security and Sustainability in Southeast Asia

BACKGROUND CONTEXTS

This ***ASEAN Technical Meeting and Multi-Stakeholder Policy Dialogue*** workshop is one of a series of activities planned during the 2017-2020 period contributing to the *ASEAN Work-Plan on Education (AWPE), 2016-2020*, **PROJECT. 47.** "Conduct multi-disciplinary research on social and sustainability sciences for understanding social, environmental and economic issues and impacts of ASEAN integration including analyses of significant policy implications for governments." Thailand is lead country for AWPE Project 47 with Philippines as co-sponsor. UNESCO is also a core international partner. SEAMEO-SEARCA joined the launch of Project 47 in Bangkok and is now a strategic supporter of Project 47 aiming to integrate AWPE activities with SEARCA's current Five year Plan for *Inclusive and Sustainable Agricultural and Rural Development (ISARD) in Southeast Asia* Development (2015-2019) while envision priorities for follow-up. The Office of the Higher Education Commission (OHEC), Ministry of Education, Thailand provided Chulalongkorn University (CU) with seed funding to execute a small pilot project through the CU School of Agricultural Resources (CUSAR) and others. CUSAR hosts a regional ***Expert Group on Higher Education for Sustainable Agriculture (HESA) and Food Systems in Southeast Asia*** funded by the Swedish International Agricultural Network Initiative (SIANI) and Swedish International Development Cooperation Agency (Sida). HESA- SIANI Expert Group Members for 2017-2018 represent a network of around 16 National Focal Point Team members with academic leaders from universities in the 8 ASEAN Member States (Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Thailand and Viet Nam) which have strong rural and agriculture based economies. The FSC is one of five centers under the DAAD program EXCEED – Higher Education in Development Cooperation, funded by the German Federal Ministry for Economic Cooperation and Development (BMZ), established for the realization of the UN Sustainable Development Goals related to food security. This ***Technical Meeting and Multi-Stakeholder Policy Dialogue*** is intended as a unique opportunity to review existing data and research while thinking and planning strategically about the future of ***Higher Agriculture Education, Research and Extension (ASEAN-HAERE) for Food Security and Sustainability in Southeast Asia.***

WORKSHOP OBJECTIVES

1. **Present/Share** available data and analysis on the State of ASEAN Higher Agriculture Education, Research and Extension (ASEAN-HAERE) with implications for/impacts on poverty reduction, food security, rural sustainability and climate change adaptation.

2. **Conduct** a regional Policy Dialogue on HAERE for Poverty Reduction, Food Security, Rural Sustainability and Climate Change adaptation and mitigation in Southeast Asia reflecting on data presented by experts about issues for ASEAN Member States (AMS)

3. **Discuss** how to design, improve, innovate and better finance sustainable agri-food system curricula, teaching, research and farmer extension programs in Southeast Asian universities and colleges and technical training institutes.

4. **Facilitate** expert technical analysis, inputs and recommendations to implement HAERE activities in the *ASEAN Work-Plan on Education (AWPE), 2016-2020*, **PROJECT. 47.** "Conduct multi-disciplinary research on social and sustainability sciences for understanding social, environmental and economic issues and impacts of ASEAN integration including analyses of significant policy implications for governments."

5. **Invite** insights from experts on the State of HAERE in ASEAN, its implications for Poverty Reduction, Food Security and Rural Sustainability in Southeast Asia, and how reforms to HAERE can contribute more specifically to AWPE outputs, meeting United Nations Sustainable Development Goals (SDGs) and addressing climate change

6. **Discuss** how university experts collaborating with various national or regional research and educational organizations, farmer-scientist networks and other partners can help governments and international agencies implement, monitor and evaluate SDG2 - *"End hunger, achieve food security and improved nutrition and promote sustainable agriculture*" together with SDG4 – *"Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.*"

7. **Identify** gaps in the SDG and ASEAN agenda together while assessing and reinforcing SDG 2 and 4 synergies and crosscutting linkages among all other SDGs from reducing rural poverty to promoting health and gender equality, to creating greener jobs based on sustainable agri-food system production and consumption; to preventing land degradation or biodiversity loss while mitigating or adapting to climate change.

8. **Propose** specific, realistic project ideas for framing and funding multi-year research, education, training, capacity development and extension activities on sustainable agriculture and food system**s** for Higher Education Institutions (HEIs) within and across Southeast Asia; and to improve government policies, public investments and Southeast Asian regional programmes in Higher Agriculture Education, Research and Extension (ASEAN-HAERE).

PROGRAM

DAY 1 – Wednesday 6 December 2017

8:30 am to 9:00 am REGISTRATION

9:00 am to 9:15 am **Host Welcome and Opening Remarks**

- **Ms. Rodora T. Babaran**, Director, Human Development Directorate, ASEAN Secretariat

9:15 to 9:30 am **Participant Roundtable - Brief Self-Introductions**

9:30 to 10:30 am **Background Contexts for APWE Project 47 and Technical Workshop**

MODERATOR (SEARCA Scholar, **Dr. Joy Jamago,** Associate Professor**,** Department of Agronomy and Plant Breeding, Central Mindanao University, Philippines)

- **Dr. Maria Cristeta N. Cuaresma,** Program Head, Graduate Education and Institutional Development Department**,** Southeast Asian Ministers of Education

Organization (SEAMEO Southeast Asian Regional Center for Graduate Study and Research in Agriculture (SEARCA), Los Banos, Philippines

- **Dr. Wayne Nelles**, Canadian Visiting Scholar, Chulalongkorn University School of Agricultural Resources (CUSAR), Bangkok

10:30 am to 10:45 am Coffee Break (with GROUP PHOTO)

10:45 am to 12:15 PM **SESSION 1 - Cross-Sectoral ASEAN Policies, Programs, Working Groups and Partnerships implicating *HAERE* in Member States**

MODERATOR (SEARCA Scholar, **Dr. Nathaniel Alibuyog,** Vice President for Research and Extension, Mariano Marcos State University, Philippines)

- **Ms. Abigail C. Lanceta,** Assistant Director and Head, Education, Youth and Sports Division, ASEAN Secretariat, Jakarta

- **Mr. Pham Quang Minh,** Assistant Director and Head, Food, Agriculture and Forestry Division, ASEAN Secretariat

- **Ms. Natalia Derodofa, Senior Officer,** Environment Division, ASEAN Secretariat

12:15 PM to 1:30 PM Lunch

1:30 PM to 3:15 PM **SESSION 2 - National Country Reports/Technical Presentations** (on the Status of Higher Agriculture Education, Research and Extension). Preliminary Results: "Mapping and assessment of food and agriculture teaching, learning, research and extension in HEIs and research organizations" (including SWOT analysis).

MDERATOR (SEARCA Alumnus, **Dr. Asdi Agustar**, Andalas University, Indonesia)

- **CAMBODIA: Dr. Borarin Buntong** Director, Division of Research and Extension, Royal University of Agriculture (RUA). Phnom Penh.

- **INDONESIA: Dr. Siti Amanah**, Chair Person, Department of Communication and Community Development Sciences, Faculty of Human Ecology, Bogor Agricultural University (IPB)

- **LAOS: Dr. Saythong Vilayvong**, Adviser, Office of Research and Services and President, National University of Laos (NUOL).

- **MALAYSIA, Dr. Norsida Man***,* Associate Professor, Department of Agriculture Technology, Faculty of Agriculture, Universiti Putra Malaysia (UPM)

3:15 to 3:30 PM Coffee Break

3:30 PM to 4:45 PM **SESSION 3 - National Country Reports, cont.**

MODERATOR (Senior SEARCA Alumnus, **Dr. Bambang Suwignyo,** Head, Department of Nutrition and Feed Science, Faculty of Animal Science, Universitas Gadjah Mada)

- **PHILIPPINES: Dr. Enrico Supangco**, Professor and Dean, College of Agriculture and Food Science, University of the Philippines Los Baños (UPLB);

- **THAILAND: Dr. Supawan Visetnoi,** Lecturer, Chulalongkorn University School of Agricultural Resources (CUSAR)

- **VIET NAM**; **Dr. Nguyen Thanh Binh,** Vice-Head, Department of Agricultural Systems, Mekong Delta Development Research Institute, Can Tho University (MDI-CTU)

4:45 PM to 5:00 PM - Wrap-up of the Day, Questions, Unfinished business – Plans Day 2

DAY 2 – Thursday 7 December 2017

9:00 am to 9:15 am - **Participant Reflections on Day 1** (ASEAN Contexts and National Reports) – Informal Discussion/Comments and Questions

9:15 am to 10:30 am **SESSION 4 – Regional Organizations or NGOs on *HAERE* Priorities, Perspectives Plans and Partnership in ASEAN-SEAMEO Region**

MODERATOR (Senior SEARCA Alumnus, **Dr. Asdi Agustar**, Andalas University, Indonesia)

- **Dr. Jesus Fernandez,** Deputy Director, (or Representative) SEAMEO-Southeast Asian Regional Centre for Tropical Biology (Biotrop), Bogor

- **Dr. Muchtar Mansyur,** Director, SEAMEO Regional Center for Food and Nutrition (SEAMEO-RECFON), Jakarta

- **Dr. Maria Cristeta N. Cuaresma,** Program Head, Graduate Education and Institutional Development Department**,** Southeast Asian Ministers of Education Organization (SEAMEO Southeast Asian Regional Center for Graduate Study and Research in Agriculture (SEARCA), Regional Headquarters, Los Banos, Philippines

- **Dr. Filma Calalo**, Asia Pacific Island Rural Advisory Services (APIRAS) and University of Philippines Los Baños (UPLB) with **Dr. Siti Amanah**(Chairperson, new Southeast Asia Rural Advisory Services (SEARAS) Network

10:30 am to 10:45 am Coffee Break

10:45 am to 12:15 am **SESSION 5 - International Organizations and Networks on *HAERE*.**

MODERATOR (Senior SEARCA Alumna, **Dr. Joy Jamago,** Associate Professor**,** Department of Agronomy and Plant Breeding, Central Mindanao University, Philippines)

- **Dr. James Roshetko,** Leader of Trees, Agroforestry Management and Marketing Unit - Agroforestry System Scientist**,** World Agro-forestry Center/ICRAF, Bogor,

- **Mr Masakazu Ichimura,** Head Centre for Alleviation of Poverty through Sustainable Agriculture (CAPSA), UN Economic and Social Commission for Asia and Pacific (UNESCAP), Bogor Indonesia

- **Dr. Daniel Ruiz de Garibay**, Regional Coordinator for Eastern Europe and Asia-Pacific, World Rural Forum (WRF), and Universitas Indonesia

12:15 PM to 1:30 PM Lunch

1:30 PM to 3:15 PM **SESSION 6 –Small Group Breakouts – Priorities and Strategic for Planning, Future Projects and Funding-on *HAERE* in the AWPE**

Possible Discussion Sub Themes (using SWOT Analysis and/or other Tools)

1. Higher Agriculture ***Education*** in ASEAN Member States (AMS) – Programs, Curricula, Teaching, Faculty, Students (Moderator/Documenter: **Dr. Asdi Agustar**)

2. Higher Education and Agriculture ***Research*** Themes, Capacities, Necessities – Social, Technical, Agronomic, and other scientific issues (Moderator/Documenter" **Dr. Joy Membreve Jamago**)

3. Higher Education ***Extension*** Capacities, Partnerships and Needs - Applying university and other scientific knowledge, priorities, partners and projects to farmer field practices and rural sustainability outcomes (Moderator/Documenter: **Dr. Nathaniel R. Alibuyog**)

4. Collaborative Project Development, Program Planning and Funding Priorities within and across AMS universities or other HEIs (Moderator/Documenter: **Dr. Bambang Suwignyo**)

3:15 to 3:30 PM Coffee Break

3:30 PM to 4:45 PM **SESSION 7 – Plenary Reports Summaries (Small Group Work)**

4:45 PM to 5:00 PM - Wrap-up/Next steps in *AWPE 2017-2020* planning and outputs

- **Dr. Maria Cristeta N. Cuaresma,** SEAMEO-SEARCA.

- **Dr. Wayne Nelles**, Visiting Scholar, CUSAR

- **Ms. Abigail C. Lanceta,** Assistant Director/Head, Education, Youth and Sports Division ASEAN Secretariat.