Editorial

APAARI Sets out on the Path towards Realizing the SDGs

On 25 September 2015, the United Nations General Assembly adopted the 2030 Development Agenda titled “Transforming Our World: the 2030 Agenda for Sustainable Development”. Building on the Millennium Development Goals (MDGs), the 17 Sustainable Development Goals (SDGs) and 169 targets demonstrate the scale and ambition of the new universal agenda for transformation of our world by 2030. The integration and balance of the three dimensions of sustainable development: the economic, social and environmental, will stimulate action to end poverty and hunger, protect the planet, ensure prosperity for all, foster peace, and mobilize partnerships to implement the ambitious 2030 Agenda.

APAARI Executive Committee Meeting

The APAARI Executive Committee (EC) Meeting was held at the Rama Gardens Hotel, Bangkok, Thailand on 10 December 2015 under the Chairmanship of Mr Somchai Charnnarongkul, Chairman, APAARI and Director General, DOA, Thailand. The meeting was attended by 44 participants including APAARI EC members, APAARI members and special invitees.
High Level Policy Dialogue on Investment in Agricultural Research for Sustainable Development in Asia and the Pacific

APAARI in collaboration with the Australian Centre for International Agricultural Research (ACIAR), Department of Agriculture (DOA), Thailand, Food and Agriculture Organization of the United Nations (FAO), Global Forum on Agricultural Research (GFAR) and International Food Policy Research Institute (IFPRI) organized the High Level Policy Dialogue (HLPD) on Investment in Agricultural Research for Sustainable Development in Asia and the Pacific on 8-9 December 2015 at Rama Gardens Hotel, Bangkok, Thailand. The event was supported by Syngenta and Agricultural Research Technology Institute, Chinese Taipei.

The focus of the Dialogue was on discussing the direction, needs and mechanisms to enhance and improve investments (financial, infrastructure, capacity development and policy support) in agricultural research and innovation systems (including extension and education) that can contribute to improving the region’s overall agriculture and agri-food systems and achieving the Sustainable Development Goals (SDGs). The immediate purpose of the Dialogue was to catalyze policy/decision makers, re-sensitize NARS, and create an environment for increased resource allocation and congenial policy environment for agricultural research and innovation for sustainable development in Asia and the Pacific.

The Policy Dialogue was inaugurated by Dr Sakchai Sriboonsue, Deputy Permanent Secretary, Ministry of Agriculture and Cooperatives, Government of Thailand in presence of Dr Kundhavi Kadiresan, ADG, FAO-RAP, Mr Somchhai Charnnarongkul, Chair, APAARI and DG, DOA, Thailand, Dr Surmsuk Salakphet, DDG, DOA, Thailand, and Dr Raghunath Ghodake, Executive Secretary, APAARI, and other participants. A total of 131 participants from 31 countries attended the Policy Dialogue. The participants included high level policy makers, leaders of NARS and CG centers, research, innovation and extension experts, representatives of NGOs, farmers, youth and the private sector.

The technical program was organized into seven theme-based plenary and parallel sessions as follows: Session I: Status and Outlook for Investment in Agricultural Research and Innovation; Session II: Scoping Investments in Agricultural Research and Innovation - Addressing Current and Emerging Challenges; Parallel Session III (A): Scoping Investments in Agricultural Research and Innovation - Climate Smart and Sustainable Agriculture; Parallel Session III (B): Scoping Investments in Agricultural Research and Innovation - Knowledge Management for Sustainable Agriculture; Parallel Session III (C): Scoping Investments in Agricultural Research and Innovation - Capacity Development for Sustainable Agriculture; Session IV: Plenary – Discussion on outputs of Sessions II and III presented by rapporteurs; Session V: Impact Expectations from Investment in Agricultural Research and Innovation; Session VI: Innovative Funding Mechanisms; Session VII: Final Plenary - Reports featuring summary, highlights and recommendations from four Thematic Sessions presented by rapporteurs of different Sessions and General Discussion and Final Recommendations.

Twenty six keynote and resource papers were presented at the Dialogue. In addition, 14 panelists led the discussions in three sessions. Outputs and recommendations of each session were further discussed and finalized in the Final Plenary Session.

In the Closing Session, Dr Raghunath Ghodake reiterated the three key points summarized by Mr David Shearer, ACIAR as the concluding statements of the Policy Dialogue.

- Firstly, innovation needs to be central to a new paradigm – Research outcomes in partnership for development and a small number of successes are the successes of the whole system.
- Secondly, data, information and knowledge are power – Baseline data, information and knowledge and trusted partnerships as part of the knowledge continuum in support of socioeconomic growth.
- Thirdly, impact is the end game and capacity building is the legacy – Delivery on capacity building and effectively going through impact pathways.

Dr Ghodake also charted the way forward and follow-up actions to contributing to the SDGs in the Asia-Pacific region. These include:

- Feed the Dialogue results into GCARD 3 global event.
- Refine country reports and synthesis paper for an independent print.
- Establish resource group in the Asia-Pacific region for advocacy and assistance.
- Develop advocacy toolkit for structured application.
- Establish platform for on-going dialogue and enhancement.

The further advanced Way Forward actions will include:

- Assessment and documentation of innovative funding mechanisms
- Refined and comprehensive scoping of investment options and priorities under different scenarios
- Demand and partnership based efforts in national, sub-regional and regional strategic AR4D planning for improved delivery and investment
- Skills and capacity development in mobilizing and attracting investment
- Improved traction among global, regional and national agencies
- Enriching and sharing data and information bases on successful efforts and impacts
- Coordination and implementation of projects on monitoring of R&D investment, capacity and impact in Asia and the Pacific

Implementation of CRP Dryland Cereals Scholarship Program

APAARI had signed a Memorandum of Understanding (MoU) with ICRISAT to collaborate in CGIAR Research Program (CRP) on Dryland Cereals Scholarship Program. The objective of the program is to: i) develop a new cadre of scientists with core competencies, knowledge and experience in advanced science and technologies that address productivity and quality enhancements, post-harvest value and policy interventions for the dryland cereals; ii) encourage and develop excellence in fundamental and practical research capabilities of women and early-career scientists in developing countries to address global challenges in agriculture, with a focus on dryland cereals, and iii) strengthen and enhance human resource capacities of national agricultural research institutions in the developing countries in Asia.

Six candidates from Punjab Agricultural University, Ludhiana, Sri PV.N. Telangana State University for Veterinary, Animal, Fishery Sciences, Hyderabad; Field Crops Research & Development Institute, Mahailuppallama, Sri Lanka; Northwest Agriculture and Forestry University, China; and B.A. College of Agriculture, Anand Agricultural University, Anand were selected for their Ph.D. research work.

The Letters of Agreements between APAARI and the respective Universities/Institutions have been signed. The total allocated scholarship grant is USD 150,000 out of which USD 64,212 is allocated for scholarship of these six candidates. Out of this allocated amount, USD 19,263 (30%) amount has been disbursed in the first tranche.

Editorial

More than any other development area, agriculture is the common thread holding the 17 SDGs together in the transformation tapestry. The SDGs will shape the next 15 years of agricultural research policies, programs and funding in the region. Besides addressing hunger and malnutrition, investments in the agricultural sector will also tackle challenges related to poverty, climate change, natural resources, and sustainable production and consumption. The 2030 Agenda, therefore, sets an important direction for the future of agriculture and agri-food research and innovation systems in the context of the Asia-Pacific region.

Two of these SDGs are the most relevant to the Asia-Pacific region as well as the work of APAARI. SDG 2 calls specifically to “end hunger, achieve food security and improved nutrition and promote sustainable agriculture”. To fulfill this goal, all detailed targets identified by the United Nations (UN) are in the mainstream of APAARI’s future contributions to sustainable agricultural development. SDG 12 on sustainable consumption and production focuses on reducing food losses and waste through more sustainable pre- and post-harvest practices – another area of importance for APAARI.

Looking at the needs of the Asia-Pacific region during the next 15 years, APAARI has revisited its past achievements, and in line with the SDGs developed a renewed vision – APAARI Vision 2030. This is to foster agricultural research and innovations for development (ARI4D) even more effectively, thereby contributing towards addressing the key concerns in making agriculture and the Asia-Pacific region more sustainable.

A recent contribution to the fulfillment of APAARI Vision 2030 has been the High Level Policy Dialogue on Investment in Agricultural Research for Sustainable Development in the Asia-Pacific Region, which was organized on 8-9 December 2015 in Bangkok, Thailand. This successful Dialogue explored the possibilities of improving resource mobilization through innovative systems where governments and other development organizations are better equipped to meet the challenges of today and tomorrow to deliver on the development outcomes and the SDGs within the region. One of the key results of the Dialogue has been the Way Forward that focuses on investment in and capacity development for impact-based agricultural research and innovation systems in the region, and self-sustaining governance and resource mobilization for APPARI.

The Way Forward will feed into GCARD 3 global event and the development of an advocacy toolkit to promote greater investments in agricultural research. In turn, these will lead to improved collaboration, skills and capacity development for mobilizing and attracting such investments. As a result, innovative funding mechanisms can be assessed and investment options refined. This will contribute to strengthened innovations in agri-food systems, agricultural development and improved food and nutritional security leading to more sustainable growth. With such development outcomes, we envision a region free of poverty and hunger, in which consumption and production patterns and use of all natural resources are sustainable.

The results of the High Level Policy Dialogue are just the beginning as APAARI sets to develop its Strategic Plan for 2017-22 under the renewed Vision 2030. Transformation of agriculture and agri-food systems, integration of agricultural value chain actors with markets and making agriculture more knowledge intensive, are just a few thematic thrusts that APAARI will focus on in setting out on the path towards realizing the SDGs in Asia and the Pacific.

Editors
APAARI Executive Committee Meeting

Dr Raghunath Ghodake, Executive Secretary, APAARI welcomed Mr Somchai Charnnarongkul and requested him to chair the Executive Committee meeting. Dr Ghodake also welcomed all the members and special invitees to the meeting.

Mr Somchai Charnnarongkul welcomed all the members and invited participants. He highlighted the importance of this meeting with a view to charting out strategies and priorities for APAARI during the next 6-7 years. He further mentioned that many changes have taken place and are happening within and outside of APAARI and the Asia-Pacific region and we have to look forward to APAARI to be highly relevant and progressive to the development of research and innovation systems in Asia and the Pacific.

The Chairman highlighted that APAARI has made significant achievements in the past but much more needs to be done in view of the changing agricultural scenario in terms of population growth, enhancing agricultural production, food and nutrition security, poverty reduction, income generation, and climate change. APAARI is looking forward to be a highly relevant, progressive and forward looking regional organization to cater to the needs of its members, partners and stakeholders for the sustainable development of agriculture through development of research and innovation systems in the Asia-Pacific region. For this, the new Vision 2030 has to be in place to move forward the agenda of agricultural research and innovations for sustainable development with the support and cooperation of APAARI members and partners.

APAARI is committed to address the key challenges which include accelerating productivity of agricultural and farming systems; reducing the losses of agricultural produce in the supply chains; enabling agricultural systems to produce new bio-materials and integrate with more advanced agro-industries; coping with climate change, price risks and economic shocks; integrating agricultural and food value chain actors and markets; expanding opportunities for communication and capacity development; and strengthening weak and underfunded ARI4D systems. For this to happen, APAARI will develop its implementation strategy in medium-term and will have biennial operational plans to implement these actions.

The following are the highlights of decisions and outcomes of the meeting.

- APAARI Progress Report May - November 2015 was endorsed and relevant aspects of this report will be included in the Progress Report: January - July 2016.
- During the period January-November 2015, seven new Associate Members joined APAARI. One university upgraded its membership status from Affiliate to Associate Category. Besides, one university joined as new Affiliate Member.
- Audit Report and Audited Financial Statements as audited by APAARI External Auditor for the period January-October 2015 were endorsed.
- The APAARI Vision 2030 was presented and discussed. A few important points suggested by members for inclusion were: focus on women and youth; inclusion of extension in vision statement; social research and development; intellectual property issues, economic and social aspects, market linkage, integrated enterprise, quality seed production, transfer of technology, conservation and utilization of agrobiodiversity; and agro-forestry. It was clarified that most of the changes suggested are important and will be taken care during the strategic planning process. These will be part of the strategy document and no changes are required to be made at this stage to the vision document.
- The Work Plan for Jan. – April 2016 was endorsed by the Executive Committee. Further detailed Work Plan for the entire year 2016 will be developed and presented to the EC Meeting in May 2016. It was mentioned that APAARI should take lead role in GCARD 3 since all donors, CGIAR centers, international agricultural research institutions (IARC’s) and other stakeholders will be participating. This opportunity needs to be cashed in by APAARI by raising all the relevant issues and highlighting the role of APAARI in the region.
- The Strategic Plan will be developed by focussing on the key thematic thrusts as contained in the Vision 2030 document. The thematic thrusts will be addressed through the following APAARI implementation focus areas: foresight and visioning, monitoring and evaluation (PME) system to have in-built evidences of outcomes and impacts of such planned and implemented actions.
- The proposal to create additional seat on the Executive Committee for the Higher Education Sector represented by the universities was endorsed.
- The proposal for recruitment of Administrative Assistant was endorsed.
- GCARD 3 will be held in Johannesburg South Africa on 5-8 April, 2016 and the national consultations are being organized by CGIAR in Bangladesh, Nepal and Vietnam. The High Level Policy Dialogue is also a part of GCARD 3 process. Program of GCARD 3 is being developed and the details are available on GFAR website. APAARI needs to identify the constituencies from the Asia-Pacific region who should be represented in GCARD 3.
- The COA, Chinese Taipei volunteered to host the next General Assembly Meeting which was supported by Dr Dyno Keatinge, AVRDC and Ms Esther, Penunia, AFA. It was agreed that the topic of Regional Expert Consultation will be decided later.
- Mr Somchai Charnnarongkul, Chairman, APAARI expressed his satisfaction over the success and outcomes of the EC Meeting and stressed on the need for implantation of the agreed Work Plan.
APCoAB Steering Committee Meeting

The XVII Steering Committee (SC) Meeting of Asia-Pacific Consortium on Agricultural Biotechnology (APCoAB) was held at the Rama Gardens Hotel, Bangkok on the 10 December 2015. The SC was attended by eight members comprising SC members or their representatives and one special invitee and four observers. The meeting began with brief welcome and introductory remarks by Dr Raghunath Ghodake, APAARI Executive Secretary.

The Chairman APAARI Mr Somchai Charnarongkul, Director General (DG), Department of Agriculture (DOA), Thailand as Chair of SC APCoAB, announced that Thailand was in the process of getting their Biosafety Law to be presented to Parliament after Cabinet approval. He further highlighted that it is a milestone in Agriculture Biotechnology for Thailand.

Mr Charnarongkul stressed the importance of biotechnology as a tool for the improvement of agriculture productivity although there are various challenges of adopting biotechnology in agriculture. He then handed the chairmanship to Dr Surmsuk Salakpetch, DDG, DOA, Thailand as he had another meeting to attend.

Dr Surmsuk Salakpetch welcomed all the members to the meeting and reiterated the importance of biotechnology to agriculture in the Asia-Pacific region. She stated that agricultural biotechnology enhances breeders’ ability to make improvements in crops and livestock that are not possible with traditional crossing of related species alone. As biotechnology continues to evolve, public awareness and effective communication is essential for its wider adoption and acceptance. Developing countries in the Asia-Pacific region can benefit tremendously by adopting agricultural biotechnology to enhance their socioeconomic development.

Thus, the role of APAARI together with APCoAB is very important to assist the Asia-Pacific region in achieving sustainable agricultural developmental goals through the implementation of activities for knowledge enhancement, capacity building, collaboration, cooperation and technology adoption.

The APCoAB Coordinator, Dr Vilasini Pillai presented the activities under the various agenda items and the following are the major outcomes and decisions of the meeting.

- APCoAB Progress Report: May 2014 - November 2015 was endorsed.
- Audit Report and Audited Financial Statements as audited by APAARI External Auditor for the period January-October 2015 were endorsed.
- The Steering Committee approved the APCoAB Work Plan until April 2016 for implementation. As there will be another SC meeting in May 2016, the details of the other planned activities will be presented in that meeting. The major activities to be undertaken in the first quarter of 2016 include: i) rediging of the APCoAB website; ii) regular update of the latest news in agricultural biotechnology developments; and iii) dialogue on Bt Brinjal in Bangladesh in collaboration with BARC/BARI/ISAAA/ABSPII/MABIC on the 23-25 February 2016.
- One of the decisions made was to use the Theory of Change to chart the future of the APCoAB Program.

Dr Surmsuk Salakpetch closed the meeting by thanking the members for their active participation and useful suggestions.

Workshop on Development of Communication Strategies for Adoption of Agri-Biotechnology in the Asia-Pacific Region, Chiang Rai, Thailand, 28-29 September 2015

The Asia-Pacific Association of Agricultural Research Institutions (APAARI) and its program on biotechnology, the Asia-Pacific Consortium on Agricultural Biotechnology (APCoAB), organized a workshop on Development of Communication Strategies for Adoption of Agri-Biotechnology in Asia and the Pacific on 28-29 September, 2015 at Chiang Rai, Thailand. The workshop was organized in collaboration with International Service for the Acquisition of Agri-biotech Applications (ISAAA), Malaysian Biotechnology Information Centre (MABIC) and supported by Council of Agriculture (CoA), Chinese Taipei. Dr Alongkorn Korntong, Deputy Director General, Department of Agriculture (DOA), Thailand represented the Director General, DOA in the workshop. He emphasized on the importance of plant biotechnology in enhancing agriculture productivity in a sustainable manner in the Asia-Pacific region but its successful adoption and implementation will depend on a number of critical factors including the public awareness and acceptance. International
experts from nine countries together with twenty-four agriculture researchers from 15 countries in Asia and the Pacific participated and shared their experiences as resource persons, scientists, regulators and communicators and deliberated on issues and bottlenecks in the adoption of agri-biotechnology in the Asia-Pacific region. They also discussed on policies, regulations and communication strategies that can expedite the adoption of agri-biotechnology in the Asia-Pacific region. The key problems are no longer based around not having an adequate flow of technology in the region, but are based around not having commensurate communication and understanding of agri-biotechnology opportunities. Proceedings of this workshop as well as a Communications Framework have been published. This framework is designed for research agencies and partners to assist them in developing strategies for communicating about agri-biotechnology and come up with recommendations and communication strategies that could expedite the adoption of biotech crops to harness its benefits in the Asia-Pacific region.

APAARI Vision 2030
Keeping in view the key needs, key challenges and emerging opportunities in the Asia-Pacific region, APAARI Vision 2030 was developed following the agreed step-wise action plan involving the development of initial draft by the resource person, receiving the comments and assimilating these in the draft, face-to-face brainstorming exercise, refinements in the light of comments and, suggestions from the group, circulation of draft to wider group including APAARI members, partners and other relevant stakeholders, incorporating the suggestions, articulating the terms and messages based on approved SDGs, finalization of the draft and circulation to APAARI members for any final suggestions/refinements, presentation and approval by the Executive Committee. The salient points of Vision-2030 include: APAARI’s core values; vision, mission, goal statements; APAARI’s ambitions; new competencies; and strategic framework including thematic thrusts and implementation focus areas.

The key elements of APAARI Vision are as below.

**Vision**
Strengthened Research and Innovations for Sustainable Agricultural Development in Asia and the Pacific.

**Mission**
Promoting, coordinating and strengthening agriculture and agri-food research and innovation systems through partnerships and collaboration, capacity development and advocacy for sustainable agricultural development in Asia and the Pacific.

**Goal**
The Asia-Pacific region benefits from and values APAARI’s leadership and contributions to developing agriculture and agri-food research and innovation systems.

APARIS Steering Committee Meeting

The XII Meeting of the APARIS Steering Committee was held on 10 December 2015 at the Rama Gardens Hotel, Bangkok, Thailand under the chairmanship of Dr Sermsuk Salakpetch, Deputy Director General, Department of Agriculture, Thailand who represented the Chairman, APAARI. Five members of the committee and special invites Ms Jintawee Thaignam and Dr Margaret C. Yoovatana of DOA Thailand, and Dr Junne-Jih Chen of Taiwan Agricultural Research Institute (TARI) of COA, attended the meeting.

Dr Raghunath Ghodake in his address welcomed all the members and appreciated them for sparing their valuable time to attend the meeting.

Dr Sermsuk Salakpetch, welcomed all the members of the APARIS Steering Committee and special guests to the meeting. She pointed out a number of challenges faced by agricultural sector, and emphasized that knowledge management and information sharing is one of the important mechanisms to overcome those challenges. She also highlighted the roles of APARIS in facilitation and promotion of the effective use of communication systems.

Then Dr Sermsuk proposed the agenda for approval of minutes of the XII meeting of the APARIS held on 22 April, 2014 at Hotel Royal Princess, Bangkok, Thailand, and the same were approved by the Committee Members.

Ms Chanerin Maneechansook, Program Assistant, APARIS presented the Progress/Action Taken Report for the period May 2014 - November 2015. The Steering Committee appreciated the progress made by APARIS and approved the progress and action taken report.

The following Work Plan 2016 was approved: i) collection of success stories on ICT in agriculture in Asia-Pacific region; ii) Regional Workshop on Open Journal System (OJS); iii) maintenance of APARIS web space; iv) APAARI on CD-2016 development and distribution; and v) APAARI Newsletter: bi-annual (2 issues).

It was mentioned that APAARI should establish strategy to follow-up results/feedbacks on its activities as to show evidence and impact of activities to donors and sponsors. Also, the need
was felt for improving APARIS capacity by recruiting an expert to implement APARIS programs and activities.

Dr Raghunath Ghodake apprised the Committee on the progress of recruitment of Knowledge Management Coordinator. He informed that three applicants were shortlisted and invited for interview on 11 December 2015. It was expected that the successful candidate would join APAARI in January 2016.

He informed the Committee on the detailed Work Plan for 2016, and further apprised that a revised and appropriately planned budget for 2016 will be presented to the next SC meeting in May 2016 when a new Knowledge Management Coordinator joins APAARI.

Dr Sermsuk Salakpetch in her closing remarks conveyed her appreciation of the progress made by APARIS. She thanked all the Committee members for the fruitful participation and appreciated their valuable contributions to strengthen APARIS activities in the region.

Capacity Development Workshop on Planning, Monitoring and Evaluation towards Measuring Outcomes and Impact

APAARI in collaboration with Australian Centre for International Agricultural Research (ACIAR), Global Forum on Agricultural Research (GFAR) and Malaysian Agricultural Research and Development Institute (MARDI) jointly organized the Capacity Development Workshop on 3-7 August 2015 at Kuala Lumpur, Malaysia. The Workshop provided the opportunity to participants to share their experiences in undertaking research projects in their respective countries. Presentations on necessary background information and evaluation concepts were made. Hands-on training helped the participants to orient themselves to PM&E framework and tools for better design, implementation and evaluation of projects. The workshop was attended by 31 project team leaders who are involved in orientating, planning and evaluating agricultural R&D projects from 18 countries in Asia and the Pacific. Four resource persons representing ACIAR and GFAR provided valuable inputs in the workshop.

Outcomes and Feedback

The experience in organizing this workshop shows that ongoing encouragement and support is extremely necessary. It was acknowledged that using the impact pathway framework to formulate project design and delivery will be challenging, but the participants showed a strong commitment to use these new skills in the future. Besides, the workshop provided an excellent opportunity to build supportive networks. Such networks are expected to assist in overall knowledge development, throughout the Asia-Pacific region that will be used in the future to continue to build the region’s capacity to effectively undertake suitable evaluation of agricultural research projects.

Recommendations

- It is necessary to consider developing a follow-up strategy to ensure that the knowledge gained from the workshop is being used, and that this use is valued.
- There is a need for similar workshops to be conducted periodically to train the new groups at both national and regional levels to enhance their knowledge and skills.
- A series of PM&E workshops should be conducted in order to continue to build the region’s capacity to effectively undertake suitable evaluation of agricultural research projects.
- The training session on the use of economic impact assessment is very important. It is suggested to extend time on learning the “DREAM” software package, and there is a need to organize the workshop on this topic itself.
- There is an urgent need to strengthen collaboration in advocacy and capacity building at the national, sub-regional and regional level which is very crucial to assist in overall knowledge development throughout the Asia-Pacific region.

Implementation of the Action Plan of the Tropical Agriculture Platform (TAP) in the Asia-Pacific Region

The Asia-Pacific Association of Agricultural Research Institutions (APAARI) has entered into agreement with the Food and Agriculture Organization of the United Nations (FAO) since September 2015 to support the implementation of the action plan of the Tropical Agriculture Platform (TAP) in the Asia-Pacific region. The agreement focuses on increasing capacities of public and private institutions, and strengthening organizations and networks to support innovation and the transition toward more sustainable agricultural production systems. The details of activities carried out during September – November 2015 are as follows:

- Reproduction of TAP brochure
- Reproduction of TAP flyer
- Production of TAP poster
- TAP awareness raising activities during the Regional Workshop on Development of Communication Strategies for Adoption of Agri-Biotechnology in Asia and the Pacific on 28-29 September 2015 at Chiang Rai, Thailand.
- TAP awareness raising activities during the International Conference on Prevention and Control of Avian Influenza, 21-22 October 2015, Taiwan.
Assam Agricultural University (AAU), Jorhat, India

Historical background

The seed of Assam Agricultural University (AAU), Jorhat, Assam (India) was sown way back in 1913 with the establishment of an agricultural research station at Karimganj in Barak Valley followed by another research station at Titabar in 1923 in Brahmaputra Valley. Although the stations conducted research and training, the need for an agricultural and a veterinary college was felt immediately after independence leading to the establishment of the Assam Agricultural College at Jorhat and the Assam Veterinary College at Nagaon in 1948. In 1969, the Assam Agricultural University was established embracing both these Colleges. Subsequently, the College of Home Science at Jorhat (1973), Fisheries Science at Nagaon (1988), College of Agriculture at Biswanath Chariali (1988), Second Veterinary College at North Lakhimpur (1988) and the College of Agriculture at Dhubri (2010) were established. Two more colleges, namely, the College of Horticulture at Nalbari and the College of Sericulture at Titabar have also become operational. The University has now six Regional Agricultural Research Stations (RARS), five Commodity Research Stations (CRS), 23 Krishi Vigyan Kendras (KVK) and a Biotechnology Center.

The Mandate

As laid down in the AAU Act, 1968, the broad mandates of the University are:

- Imparting education to the people in agriculture and allied branches of learning
- Furthering the advancement of learning and prosecution of research in agriculture and allied sciences, and
- Undertaking the extension of such sciences especially to the rural people of the state

The Vision

“Provisioning of quality human resource to facilitate technology led agricultural revolution ensuring both production and environment sustainability targeting a minimum of ‘eight per cent plus’ agricultural growth, while addressing the issues of household nutritional security, farmers’ distress, commerce in agriculture as well as regional, national and global food crises taking the advantage of innovative technology, market reforms and liberalization.”

Salient Achievements

A. Education

The University offers both Masters and Ph.D. programs in 70 disciplines under four different faculties (Table 1).

Table 1. Disciplines offering postgraduate degrees

<table>
<thead>
<tr>
<th>Faculty</th>
<th>PG Courses (Discipline-wise)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>16 masters, 11 Ph.D.</td>
<td>27</td>
</tr>
<tr>
<td>Veterinary</td>
<td>19 masters, 12 Ph.D.</td>
<td>31</td>
</tr>
<tr>
<td>Home Science</td>
<td>05 masters, 05 Ph.D.</td>
<td>10</td>
</tr>
<tr>
<td>Fishery</td>
<td>01 masters, 01 Ph.D.</td>
<td>02</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>41 masters, 29 Ph.D.</strong></td>
<td><strong>70</strong></td>
</tr>
</tbody>
</table>

Since its inception, the University has produced 16,067 graduates and post-graduates of which 12,568 are Bachelor, and 3,100 and 399 are Master and Ph.D. degree holders, respectively.

B. Research

Agricultural Science

- The AAU, Jorhat has developed and recommended 101 varieties of various field and horticultural crops. These include 49 in rice, 5 in pulses, 5 in toria, 1 in sesame, 9 in sugarcane, 2 in jute, and 2 in fruit crops. Varieties like Ranjit, Bahadur, Luit, Dishang, Joymati, Kanaklata, Aghoni, Keteki of rice; TS 36, TS 38 and JT 90-1(Jeuti) of toria; CoBln 9605 of sugarcane, Pratap (SG 1) of green gram have significantly contributed towards production augmentation.

- Important crop varieties developed in the recent years are Mulagabharu, Gitesh, Jalashree and Jaikuwari in rice, TS 46 and TS 67 in toria; SG 21-5 in green gram; Tarun and Apeswari in jute; Nambor, Kapilipar and Doiyang in sugarcane; Shymalima in rice bean, etc.

- The most promising varieties of horticultural crops developed at AAU include Kahikuchi Hybrid-1 of coconut, JC 1, JC 2 of brinjal; and AAUJ 2 and AAUJ 3 of ridge gourd.

- Biofertilizer based integrated nutrient management (INM) packages have been developed for rice based cropping systems.

- Biocontrol agents like Trichogramma (Tricho cards) for rice stem borer and Beauveria bassiana for hispa have been developed.

- Bio-pesticides-Biofor-PF (Jaiva-Kiran) and Biozin-PTB containing virulent cells of Pseudomonas fluorescens and Trichoderma harzianum in organic substrate have been developed for management of wilt disease of crops like tomato, potato, brinjal, chili, ginger, cabbage, cauliflower, etc.

- Post-harvest packaging and handling technologies have been developed for long-distance transportation of...
pineapple, orange etc., extending shelf-life of perishable vegetables and also for commercial floriculture.

- Technologies for off-season cultivation of vegetables and flowers have been perfected and popularized.

**Animal Science**
- Upgraded pig variety with 87.5 per cent Hampshire inheritance developed and propagated.
- Beetal × local goat cross with 75 per cent beetal blood developed.
- DNA fingerprinting of Swamp buffalo established its closeness to riverine buffalo.
- Multiple Ovulation Embryo Transfer (MOET) protocols in goat standardized.
- Cell culture vaccine for Swine Fever developed which is now being mass produced in a PPP mode.

**Home Science**
- Assam mix – a promising weaning food has been developed for both infants and lactating mothers and commercialized.
- Several traditional recipes were nutritionally fortified using the process of nutrification.
- Women-friendly farm-tool “Kuhuna” for drudgery reduction was developed and tea plucking basket was improvised.
- Standardized the methods for extraction of natural dyes from locally available plants
- Standardized the methods for extraction of natural dyes from locally available plants.
- Smokeless chullah was validated and propagated.

**Fisheries Science**
- Developed polyhouse fishery for advance breeding of fish.
- Crop - fish - livestocks based Integrated farming system models have been developed for Assam conditions.
- Cat-fish magur (Clariasbatrachus) seed production successfully carried out.
- Developed low-cost model of carp hatchery.
- Developed low-cost fish feed under the trade name “Sushama”.
- Capacity built to produce 8 crore (80 million) fingerlings per year.

**Commercialized Products**
Several products have been commercialized by the University. These include: Bt Chickpea, Assam Mix, Swine Fever Vaccine, Meat Pickle and Paste, Pork Sausage, Smoked Pork, Pork Pickle, Chicken Pickle, Fish Pickle, AAUVEGETMIN, Low Cost Fish Feed-SUSHAMA, Biopesticide-Biozin.

**Technology Dissemination**
- Technology dissemination was done through ICT based tools and applications like e-Choupal, Rural Knowledge Center, AAU portal, Mobile solutions, etc. besides participatory mode.

**Skill Development**
- Certificate courses ranging from 1-6 months duration in different areas of agricultural sciences have been undertaken to produce highly skilled manpower for the sector.

**Collaboration**
- The University has established both national and international collaboration especially with European Union countries, Universities in USA, Institutes in Australia, Kenya, etc.

**Awards & Recognitions**
- Sardar Patel Outstanding Institution Award, Agriculture Leadership Award, Best Zonal KVK Award, Fakhruddin Ali Ahmed Award, Awards for Best AICRP/AINP centers, Best Farmer Award and several other awards were received by the University.

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**Table 2. Training programs and beneficiaries**

<table>
<thead>
<tr>
<th>Type of program</th>
<th>Number</th>
<th>Beneficiaries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farmers’ training</td>
<td>5864</td>
<td>159591</td>
</tr>
<tr>
<td>Vocational training</td>
<td>167</td>
<td>4472</td>
</tr>
<tr>
<td>State and other functionaries</td>
<td>145</td>
<td>3285</td>
</tr>
<tr>
<td>Frontline demonstrations</td>
<td>1658</td>
<td>7660</td>
</tr>
<tr>
<td>On-farm trials</td>
<td>1281</td>
<td>9059</td>
</tr>
<tr>
<td>Villages adopted</td>
<td>250</td>
<td>15000</td>
</tr>
</tbody>
</table>

- “Technology Showcasing” was successfully done in rice, toria and lentil covering 15 districts of Assam

**C. Extension**
- The University has Successfully conducted Training and Demonstration Programs. During 2009-14, the number of beneficiaries from farmers training, vocational training, State and other functionaries, front-line demonstration

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(Source: Dr K.M. Bujarbaruah, Vice Chancellor, AAU, Jorhat; vc@aau.ac.in)
Chinese Taipei

Multi-Country Observational Study Mission on Revitalizing Rural Economies for More Inclusive Development

The Council of Agriculture (COA), Executive Yuan, China Productivity Center and the Asian Productivity Center together with APAARI co-organised a Multi-Country Observational Study Mission on Revitalizing Rural Economies for More Inclusive Development on 14-18 September 2015 in Chinese Taipei. The aim of the study mission was to study the policy and institutional settings for better revitalization of rural economies as well as to learn from the strategies, approaches, and successful models used to revitalize the host country’s rural economies. The participants would then be able to formulate strategic action plans to utilize for the revitalization of their own rural economies and disseminate findings of the study mission in their own respective countries. The study mission consisted of visits to sites of successful cases of revitalization of local economies in the host country, theme presentations, sharing of experiences among member countries, and individual/group exercises. APAARI nominated six participants from Vietnam, Nepal, the Philippines, Pakistan, and Bangladesh.

International Symposium on Biopesticides and Biofertilizers for Sustainable Agriculture

The Agricultural Technology Research Institute (ATRI) co-organised with APCoAB, COA and China Productivity Center, the International Symposium on Biopesticides & Biofertilizers for Sustainable Agriculture on 13-15 October 2015 in Chinese Taipei. A total of 120 participants from industry, regulators, and scientists from Universities and Research Institutes in Chinese Taipei as well as experts and officials from Thailand, Philippines, Malaysia, Vietnam, and Indonesia attended the Symposium. The main objective of this Symposium was to understand registration systems, policies, regulation rules, development, management and marketing of biopesticides and biofertilizers of Southeast Asian countries.

The presentations covered the respective country laws and regulations on registration of biofertilizers and biopesticides as well as the latest research and development on biofertilizers and biopesticides. There was a field visit to the Kaohsiung District Agricultural Research and Extension Station, COA, Pingtung Agricultural Biotechnology Park (PABP), COA and a Biofertilizer Factory called Advanced Green Biotechnology Inc. APAARI nominated Dr Ganesan Krishnan, a participant from Malaysia.

Outputs

- Better understanding of the registration systems, policies and regulation rules in biopesticides and biofertilizers in Chinese Taipei and other Southeast Asian countries
- Status of research and development in the field of biofertilizers and biopesticides of Chinese Taipei and other Southeast Asian countries
- Promotion of international cooperation in the field of biofertilizers and biopesticides between researchers and industry

Suggestions and Recommendations

- There is a need to encourage and promote the wider use of biopesticides and biofertilizers. This will then increase the production and bring the cost down.
- It was agreed that a mechanism for regional or international cooperation should be set up under the umbrella of Association of Southeast Asian Nations (ASEAN).
- ATRI to initiate a regional consortium with industry players and other experts in this field to organize symposiums, workshops and conferences.
- To conduct more research in increasing the shelf life of biopesticides and biofertilizers at the request of Industry as this is a major problem faced by manufacturers
- To consider having botanical pesticides de-regulated or easier process of registering as they are extracts from plants, having lower toxicity. However, it is important to look into their proper formulation
- To study the problems involved in the export of biopesticides and biofertilizers and come up with better solutions to ease this problem
- To prepare a list of materials that would be exempt from registration
- To have a list of terminologies, agreed by all experts from the various countries in Southeast Asia and Chinese Taipei so that there is better understanding of what falls under the various categories
- ATRI will prepare the proceedings of this Symposium.
- All the suggestions and recommendations will be taken up for implantation by the Department of Science and Technology, COA, Chinese Taipei.

Conclusion

The agriculture sector in Chinese Taipei has advanced to a stage that is comparable to that in the western world. This is mainly due to Government support as well as international cooperation and collaboration. Huge investments in building capacity in the areas needed by the agriculture sector has paid off as these young talents trained from world leading Universities came back armed with the latest technologies and knowledge to spearhead many of the agriculture related programs.

(Source: Ms Siao-huei Jiang, Department of International Affairs, COA, Chinese Taipei; ssjiang@mail.coa.gov.tw)
International Conference on Prevention and Control of Avian Influenza

The Animal Health Research Institute (AHRI), APCoAB and COA, co-organised the International Conference on Prevention and Control of Avian Influenza on 21-22 October 2015 in Chinese Taipei. The conference, discussed issues about enhancing communication and collaboration among Asian countries to fight against the disease. The conference provided opportunities to share information and experiences on prevention and control of avian influenza for government officials, researchers and stakeholders. The output of the conference was to establish a communication network for the international collaboration on co-defense mechanism, and to achieve the goal of fighting invasion and spread of avian influenza. The experts came from Japan, Chinese Taipei, USA and Korea participated. APAARI supported one participant from Vietnam, Dr Raghunath Ghodake, Executive Secretary of APAARI also attended this conference.

India

Raith Chetana Help Line for Farmers

In view of the rising number of farmers’ suicides in Karnataka State of India, the University of Agricultural Sciences (UAS), Dharwad initiated an innovation method to contain the incidents. “Raith Chetana a Help Line No. 1800-425-1150” was started at the University of Agricultural Sciences (UAS), Dharwad in association with Dharwad Institute of Mental Health and Neuro Sciences (DIMHANS). The helpline was officially launched by the Deputy Commissioner Shri P. Rajendra Cholan on 23 September 2015 at the Agricultural Technology Information Centre (ATIC) at UAS, Dharwad.

Study Abroad Program with Iowa State University, Ames, USA

Study Abroad Program (SAP) titled “Food and Agri-Scenario in North America”, the brain child of Dr D.P. Biradar, Vice-Chancellor, UAS, Dharwad, with Iowa State University, Ames, USA was highly successful. The aim of the program was to expose the young minds to foreign institutes to provide them an early lead in their career. Fifteen students from agriculture, food technology, forestry and home science with almost an equal number of boys (8) and girls (7) undertook this course during 1-14 September, 2015. The two weeks learning program included visits, discussions, hands on experience, lectures and field trips in agriculture, biotechnology, forestry, food and nutrition, food safety, food technology, processing, quality control, waste management among others. Off-campus visits included Pioneer, John Deere, Iowa Choice Harvest, the Fareway Distribution Center, the Neal Smith Wildlife Refuge and Tassel Ridge Winery. En route the team visited Los Angeles, Chicago, Des Monies and New York. The entire learning process was very enlightening and enjoyable. Dr S. Hemalatha, Professor of Food Science and Nutrition and Dr Shoba Nagnur, Professor and Head, Department of Extension Communication Management, Rural Home Science College, Dharwad co-ordinated the program.

(Source: Dr D.P. Biradar, Vice Chancellor, UAS, Dharwad; vs_uasd@rediffmail.com)
The Philippines

Ensuring Rubber’s High Yield through DNA Fingerprinting and Analysis

Researchers from the University of Southern Mindanao (USM) conducted a study to validate the varietal integrity of the country’s promising rubber clones. The study became imperative as the Philippines gears up to increase the yield of rubber by 60 per cent (from 1.2 mt/ha to 1.92 mt/ha in 2020) to meet projected increase in demand in the global market.

Currently, the rubber industry faces uncertain prospects due to large areas with senile trees and the consequent productivity drop and limited replanting. Of the total 161,000 hectares planted under rubber, about 80,000 hectares are over-exploited and are due for replanting. While some farmers as well as the private sector have initiated to plant or replant rubber in about 15,000 hectares of land in different areas, and while these trees are ready for tapping in two to three years, the initiative is not enough to meet the production gap.

The USM researchers emphasized that, farmers must be assisted in terms of using genetically superior planting materials to enhance crop productivity. A project, “Validation of Varietal Integrity of Promising Rubber Clones through DNA Fingerprinting” has been initiated to accelerate and refine the process of clonel identification. The project is funded by the Philippine Council for Agriculture, Aquatic, and Natural Resources Research and Development of the Department of Science and Technology (DOST-PCAARRD).

This research and development initiative is expected to address the doubts on the quality and integrity of planting materials produced and sold by clonal gardens and nurseries to optimize plantation productivity and ensure the highest quality.

Using molecular markers, researchers have verified and validated the identity of clones from 181 rubber commercial nurseries from Luzon, Visayas, and Mindanao. The reference or standard materials used in the validation process are the trees currently planted at the USM germplasm site since these trees have been proven to give the desired yield. With DNA fingerprinting and analysis, farmers are assured of genuine rubber varieties which will eventually result to higher yield and income.

(Source: Dr R. Ebora, Acting Executive Director, PCAARRD, Philippines; pcaarrd@ pcaarrd.dost.gov.ph)

Samoa

Samoa Launches New Taro Export Varieties

Samoa has come a long way since the taro leaf blight disaster in 1993, achieving another milestone by launching three new taro varieties during the Samoa Agriculture Show in October 2015. The launch of new varieties supports taro export industry in meeting market demand for pink taro in New Zealand.

The new varieties, named, Talo Tanu, Talo Fusi and Talo Lani were selected from Tanumalala, Fusi and Salani villages after consultation between farmers, Samoa’s Ministry of Agriculture and Fisheries (MAF) and the Secretariat of the Pacific Community (SPC), using a participatory approach which involved farmers in selecting varieties in terms of taste and yield.

“Over 20,000 taro planting materials are produced for the taro launching so that farmers, the private sector, cabinet and senior officials receive enough taro planting material for further planting in their taro patches,” MAF’s Assistant Chief Executive Officer in the Nuu Crops Division, Misa Konelio, said.

Export of taro varieties Samoa 1 and Samoa 2 varieties have risen dramatically between January 2014 and June 2015, which accounts for approximately 1.5 million taro saplings exported, based on figures from the MAF taro pack-house. The number of containers of taro exported by Samoa to New Zealand and the United States of America has also increased from 4 to 16 containers per month, and this figure is expected to further increase.

Future potential export varieties have been evaluated by the Scientific Research Organization of Samoa (SROS) and one cycle 8 line has been identified that has produced four types which out-performed existing export varieties and Fiji Tausalani Samoa, in terms of taste and consumer acceptance.

The selection and release of these three new taro lines are part of the Australian Centre for International Agricultural Research and Pacific Agricultural Research Development Initiative project, developing a clean seed system for market-ready taro cultivars in Samoa led by SPC’s Land Resources Division in collaboration with MAF; the Scientific Research Organisation of Samoa, farmers and exporters.

(Source: Valerie Saena-Tuia, SPC Genetic Resources Coordinator, valeriet@spc.int)
CAPSA

Promoting Livelihoods Improvement and Food Security in Myanmar’s Dry Zone

The Centre for Alleviation of Poverty through Sustainable Agriculture (CAPSA) of the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), based in Bogor, Indonesia, is leading the implementation of the project “An Integrated Rural Economic and Social Development Program for Livelihoods Improvement in the Dry Zone of Myanmar” in partnership with the Asian and Pacific Centre for Transfer of Technology (APCTT-ESCAP), Centre for Sustainable Agriculture Mechanization (CSAM-ESCAP), Network Activities Group (a national NGO), and the Department of Rural Development of the Ministry of Livestock, Fisheries and Rural Development of Myanmar. The project, funded by the Livelihoods and Food Security Trust Fund (LIFT), aims to support an improved enabling environment for integrated socioeconomic development, with special emphasis on livelihoods improvement and food security, in Myanmar’s Dry Zone which suffers from a high incidence of poverty.

With analytical work. Three technical workshops as listed below were organized in November and December 2015.

(i) Knowledge-Sharing Workshop on Enabling Environment for Custom Hiring of Agricultural Machinery in the Dry Zone of Myanmar, 30 November – 1 December 2015, Mandalay

(ii) Workshop on Promoting Farmer-led Innovation for Climate-resilient Agriculture in Myanmar’s Dry Zone, 10-11 December 2015, Mandalay

(iii) Workshop on Mung Bean Seed Production and Quality Control, 21-22 December, 2015, Magway

These workshops are aimed at strengthening the skills of over 50 mid-level technical, professional and managerial staff from union and local governments, international and local NGOs as well as entrepreneurs and private sector representatives working on sustainable agriculture in the Dry Zone, while also leveraging ESCAP’s position as a regional institution to provide exposure to good practices from other countries.

Three workshops on technical aspects and three on policy-related topics will be organized in 2016 to further strengthen national capacities. In addition, two policy papers focusing on policies, institutions and processes, and knowledge management for sustainable agriculture in the Dry Zone will be developed. Two policy dialogues will also be organized to discuss key issues highlighted through the analytical and capacity building work of the project.

(Source: Dr Anshuman Varma, Knowledge Management Coordinator, CAPSA; a.varma@uncapsa.org)

APAARI New Members (2015)

New Associate Members:
- International Potato Center (CIP), Lima, Peru
- International Center for Biosaline Agriculture (ICBA), Dubai, United Arab Emirates
- International Centre for Integrated Mountain Development (ICIMOD), Kathmandu, Nepal
- Crops for the Future (CFF), Jalan Broga, Malaysia
- Center for International Forestry Research (CIFOR), Bogor, Indonesia
- Junagadh Agricultural University (JAU), Junagadh, India
- Assam Agricultural University (AAU), Jorhat, India
- Kamdhenu University, Gandhinagar, Gujarat, India (Effective 2016)

Upgraded Associate Member:
- Central Agricultural University (CAU), Imphal, India

New Affiliate Member:
- University of Agricultural Sciences (UAS), Dharwad, India
GFAR

GFAR Constituent Assembly

Background

The GFAR Constituent Assembly organized at Bangkok on 24-26 August 2015 brought together over 100 representative stakeholders from all sectors and all regions, to consider and renew the role, purpose and governance of GFAR. This landmark Assembly formed a key step in a process of governance review, reform and renewal of the Global Forum, responding to the fact that much has changed in the world of agricultural research and innovation since the Forum was first established in 1996.

Participants in the Assembly were selected from each region by regional fora and networks, and globally, as involving a legitimate and representative cross-section of organizations and networks, as identified by the multi-stakeholder Strategic Governance Working Group. They included farmers’ organizations, consumer associations, NGOs/CSOs, the private sector in various forms, national public research and rural advisory services, higher education, regional fora for agricultural research and innovation, FAO and other multilateral organizations, international agricultural research centres, women’s groups, youth groups, development banks and foundations, and financing and technical partners. Participants included those long familiar with the Global Forum and those new to the Forum and its partners.

The Assembly was structured around four discussion papers: i) Renewing GFAR’s Role and Purpose, ii) Reframing Collective Action, iii) Reframing Governance, iv) Resourcing the Global Forum. The discussion papers were prepared by a multi-stakeholder Strategic Governance Working Group, drawn from the GFAR Steering Committee. The Discussion Papers were made publicly available and discussed in webinars in advance of the Assembly and provided the background and context for the issues to be discussed and decisions requested of the participants.

Conclusions

This landmark Assembly has provided a resounding endorsement of the reform and renewal of GFAR as follows.

1. The Assembly redefined the role and purpose of the Global Forum through strong agreement (94% agreement) on a new Vision: “The Global Forum makes agri-food research and innovation systems more effective, responsive and equitable, towards achieving Sustainable Development Outcomes” and Mission: “Partners in the Global Forum, at national, regional and international levels, advocate for, and catalyse Collective Actions that strengthen and transform agri-food research and innovation systems”

2. A formal basis was agreed (91% agreement) for the definition and basis of GFAR Collective Actions, a key operational mechanism for the Global Forum. Specifically, the following was agreed.

(i) A GFAR collective action is a multi-stakeholder program of work at national, regional or international level, initiated by three or more partners and prioritized by the Global Forum, always including producers and with a particular focus on women and youth.

(ii) Partners agree to commit and generate resources together, in actions or advocacy that strengthen and transform agri-food research and innovation systems towards shared demand-driven development aims and which add value through their joint actions.

(iii) The Global Forum’s collective actions and their outcomes must be publicly recognized as contributing to the objectives of the Global Forum and the GCARD Road Map. Progress must be reported and shared with other partners through the Forum.

3. Composition of the Global Forum: The issue of membership of the Forum, including the possibility of paying fees was discussed, but a fee payment basis was ultimately considered inappropriate, given the need to retain the open and inclusive nature of the Forum and the transaction cost of operating such a scheme. Instead, institutions will be encouraged to become partners in GFAR. Stakeholders from national, regional and global organizations will identify themselves as national, regional and global partners of the Global Forum by expressing formally their alignment with GFAR’s Mission and Vision.

4. A new governance structure is now agreed (96% agreement) that includes:

The GFAR Partner Assembly, meeting every three years as part of the Global Conference on Agricultural Research for Development (GCARD). Constituencies of Partners coming from the regions will nominate participants to the Partner Assembly. The Partner Assembly is composed of Global Partners, Regional Fora Partners and Partners nominated by regional constituencies. All partners are accountable to their constituencies.

A multi-stakeholder Steering Committee will meet every year between meetings of the Partner Assembly. The Steering Committee is composed of global partners, regional fora and partners from other constituencies, selected by the Partner Assembly.

The Steering Committee will organize itself as a body and through standing committees. The reformed Steering Committee will decide what sub-committees it may, or may not, require to ensure effective operation and accountability in all respects. Until the new governance
comes into place, the existing Steering Committee will maintain its role and responsibilities.

4. GFAR’s role in regard to resourcing the transformation and strengthening of national research and innovation capacities was discussed and agreed upon (92% agreement). Participants in the Assembly recognized the need for additional and new forms of investment in national agri-food research and innovation systems and consider this a priority for advocacy through and by the Global Forum. Possible mechanisms for this will now be explored with a range of funding partners.

Follow-up Actions
The mandate of GFAR is now strongly approved, with broader representation and a clear, strong basis for GFAR Collective Actions. A series of follow-up actions will now be put in place to implement these reforms. These include:

- All participants are encouraged to sign up as GFAR Partners and encourage others to do so. A web-based system for signing up as a GFAR Partner will be implemented.
- Systematic follow-up with invitees to the Constituent Assembly, and with other Partners in GFAR, will mobilise constituencies at global and regional levels for the Partners’ Assembly.
- The functional linkage between FAO and GFAR, reinforced through the Assembly, will be further elaborated through discussion and action at high level in FAO and with Member Nations.
- GFAR’s agreed role in advocating and promoting greater and better investment in national research and innovation systems will be pursued as a collective action in demand-driven national contexts, with a range of funding and implementing partners.
- The existing Steering Committee will meet prior to the GCARD3 (probably in Rome, in early December), to agree on plans for the Partner Assembly
- The Partner Assembly will be planned as an intrinsic part of the GCARD3 event in early 2016.
- The GFAR Charter will now be revised and presented for consideration by the Partner Assembly.
- A full report of the meeting will be produced.

(Source: F.J.C. Chandler, Program Delivery Manager, GFAR; fiona.chandler@fao.org)

ICBA
New Generation Greenhouse to Help Save Water and Energy in Gulf Countries
An international team of scientists is carrying out experiments on a new generation of greenhouses at the Agricultural Innovation Centre in Al Dhaid, Sharjah, the United Arab Emirate (UAE), which can help to save up to 90 per cent of water and cut significantly on energy. The experiments are being conducted by a group of researchers from the Food and Agriculture Organization (FAO), the International Center for Biosaline Agriculture (ICBA), the International Center for Agriculture in the Dry Areas (ICARDA) in collaboration with the Ministry of Environment and Water (MoEW) of the UAE and the research group Watergy at Technical University of Berlin (TBU).

Funded by the MoEW, the research initiative aims to promote key protected agriculture solutions adapted to desert conditions and boost protected agriculture in the UAE and Gulf Cooperation Council countries. The significant amount of water savings in this type of greenhouse can have additional advantages such as: productivity is five times higher than that in the open; pest, disease and weed control is considerably more effective than in the open; and zero pollution of groundwater compared with the open.

As part of this initiative, researchers and experts from Oman, Bahrain, Kuwait, Qatar, Saudi Arabia, Jordan, Egypt and the UAE met at the ICBA head office in Dubai, the UAE, on 14-15 September 2015, to discuss progress so far and next steps. Participants discussed initial findings on crop productivity and quality; low and medium technological solutions, and put forward policy options for public and private-sector decision-makers.

This work is expected to contribute to the pursuit of ensuring food and water security for sustainable social and economic development in the region and beyond.

(Source: Abdumutalib Begmuratov, Senior Publications and Editing specialist, ICBA; a.blgmuratov@biosaline.org.ae)

ICRISAT
Smallholder Farmer to Seed Producer – A Transition in Odisha
To enable smallholder farmers in the Indian state of Odisha move up the value chain by becoming producers of certified seed (CS), training programs were conducted in four villages.

Farmers were trained to undertake quality seed production of a high-yielding groundnut variety, ICGV 91114 (locally known as Devi) with certification from authorized agencies and use of improved production practices to raise a good crop. Besides, they were also made aware of important diagnostic features of Devi variety, so that farmers can remove the off-types to maintain genetic purity of the seed.

During the training program, about 32 tons of foundation seed (FS) of Devi variety was distributed to the farmers to take up certified seed production in the districts of Kalthanahi, Nuapada and Bolangir. These farmers will undertake the certified seed production in about 218 ha, during 2015 rainy season. Also, about 3.6 tons of breeder seed (BS) from Odisha University of
The National Academy of Agricultural Sciences (NAAS) organized a Regional Consultation on “Agroforestry: The Way Forward” on 8-10 October 2015 at NASC Complex, New Delhi - 110012.

A total of 126 participants from 12 countries, namely, India, Afghanistan, Bangladesh, Bhutan, Indonesia, Kenya, Malaysia, Nepal, the Philippines, Sri Lanka, Thailand, and Vietnam attended the Regional Consultation. The Conference was inaugurated by Shri Siraj Hussain, Secretary, Ministry of Agriculture and Farmers’ Welfare, Govt. of India, Dr Tony Simons, Director General, World Agroforestry Centre (ICRAF), Nairobi, Kenya was the Guest of Honour, while Dr R.S. Paroda, Former Secretary, Department of Agricultural Research and Education, Govt. of India chaired the session. The consultation was organized in five Technical Sessions and five concurrent Panel Discussion Sessions apart from Inaugural and Plenary Sessions.

The participants of the Regional Consultation have agreed on the following plan of action for promoting agroforestry in both Indian and regional contexts which was adopted as New Delhi Declaration.

## Indian Context

- A National Agroforestry Mission on the lines similar to National Horticulture Mission be established to ensure an aggressive approach for promoting agroforestry.
- An Agroforestry Board must be established immediately on the pattern similar to Rubber Board, Coffee Board, Tea Board, etc.
- Sufficient investments must be made to cover about 12-14 million hectares i.e. 8-10 per cent of the total cultivated area under agroforestry practices. Also, other niche areas such as the degraded lands and arid areas be covered.
- The most important agroforestry tree species for each agro-eco region in the country need to be identified on priority and action be initiated to denotify them immediately.
- It was strongly recommended that one position of subject matter specialist in each KVK, out of increased strength during the 12th Five Year Plan be exclusively earmarked for this discipline.
- A Working Group of Experts be established soon to suggest agro-ecological region-wise scientific land use planning to promote the most remunerative tree species identified based on research results available.

### ICRF  

**Regional Consultation on Agroforestry: The Way Forward**

World Agroforestry Centre (ICRAF), South Asia Regional Program, in collaboration with Indian Council of Agricultural Research (ICAR), Trust for Advancement of Agricultural Sciences (TAAS), Indian Society of Agroforestry, Asia-Pacific Association of Agricultural Research Institutions (APAARI) and...
• Special efforts are needed to produce high quality seed and planting stocks of elite materials along with much needed certification and accreditation systems.

• National sustainable development strategies should integrate agroforestry more fully into key areas such as poverty alleviation, rural livelihoods security, skill development, natural resources management, agricultural productivity enhancement, and restoration of degraded landscapes.

• With India’s INDCs pointing towards climate justice, agroforestry becomes a potent instrument of resilience-building for vulnerable and resource-poor communities and its potential for adaptation to climate change needs to be mainstreamed and highlighted in all measures related to farmers’ welfare.

• Investments in agroforestry projects and programs by public and private sectors for research, extension, enterprise, and education be encouraged and incentivized. Innovative financial mechanisms, including climate finance, for agroforestry be developed.

Regional Context

• The Nodal Ministry/Agency/Focal Point for dealing the matters relating to agroforestry needs to be clearly defined at the national and sub-national levels.

• Development of country-specific national policies on agroforestry and enabling mechanisms for their implementation need to be given high priority. Indian experience, ICRAF’s expertise, APAARI’s facilitating role, and assistance from international agencies could be useful to further this initiative.

• A Regional Consortium-cum-Network on Agroforestry with facilitation role of ICRAF, in partnership with APAARI, needs to be initiated quickly to hasten appropriate policy advocacy, public awareness, research collaboration, sharing of knowledge and germplasm, capacity development, and other collective actions.

• The proposed regional network should accord a high priority to the development of sound regional agroforestry database, information system, and eco-region based Decision Support System. Sharing of success stories of countries in the region also needs to be encouraged through open access to relevant information.

• An independent scientific study be facilitated for identification and assessment of suitable determinants to scale-up innovations for agroforestry including market mechanism, import and export policies, support prices, etc.

• Investments in agroforestry research, education, training and extension be at least doubled at national, regional and international levels.

• Medium- to long-term collaborative studies to quantify contribution of agroforestry to ecosystem services, carbon sequestration, climate change mitigation and adaptation to, etc. need to be institutionalized.

• Business planning and development involving all stakeholders in the value chain (farmer-to-consumer) needs to be institutionalized in a mission mode approach, to create a win-win situation.

• Awareness for public-private partnership through creation of enabling environment such as process patenting, branding, incentives to producers and industry, etc. need to be created to further promote agroforestry in the region.

(Source: Dr Javed Rizvi, Director, South Asia, ICRAF; j.rizvi@cgiar.org)

APAARI Strategic Plan 2017-22

APAARI Medium Term Implementation Strategy is agreed to be developed as Stage II of the planning process during the first half of 2016. The main consideration will be given to the thematic thrusts and implementation focus areas as emerged from the Vision 2030 document.

The following thematic thrusts will contribute to the sustainable transformation and development of agriculture and agri-food systems in the Asia-Pacific region.

• Transforming agriculture and agri-food systems

• Greater integration of agricultural value chain actors with markets

• Knowledge intensive agriculture for socioeconomic development

• Enabling sustainable use of natural resources, renewable energy, and forests/agroforestry

• Managing and controlling the spread of trans-boundary diseases and pests

• Coping with risks and uncertainties in agriculture and agri-food systems

• Investment and capacity development for impact-based agricultural research and innovation

• Improving APAARI’s governance and resource mobilization

The above thematic thrusts will be addressed through the following focus areas.

• Foresight and visioning

• Promoting and advocating

• Partnership and collaboration

• Strengthening and developing capacities

• Knowledge management

• Inclusion of women and youth

APAARI will design its implementation strategy, having activities and results framework based on a theory of change, in a cycle of six years beginning from 2017, by considering the thematic thrusts and focus areas. It will have biennial operational plans to implement these actions. APAARI will also follow an effective prioritization, monitoring and evaluation (PME) system to demonstrate evidence of outcomes and impacts of such actions.


**New Appointments**

**ADG, FAO-RAP**

Dr (Ms) Kundhavi Kadiresan joined as the Assistant Director-General and FAO Regional Representative for Asia and the Pacific in September 2015. As an economist, she has spent most of her professional career with the World Bank Group. She has worked in Asia, Africa, Eastern Europe and Latin America, where she led senior-level policy dialogues and managed large loan portfolios.

Dr Kadiresan brings a strategic perspective and pragmatic approach to the developmental challenges facing the world and has engaged with Heads of State, senior government officials, parliamentarians, policy makers, community leaders, civil society organizations, development partners, private sector and citizens. She has a strong track record of working with policy makers, in program development and resource mobilization. Her primary objectives are to advocate FAO’s policies throughout the region, support the coordination and monitoring of regional events, knowledge and information exchange and the further development of regional norms and standards.

Dr Kadiresan, an Indian national, is Ph.D. in Economics and MBA in International Business and has more than 25 years of experience in development. She will lead the prioritization of FAO’s work across the region.

**Director General, WorldFish**

Dr Nigel Preston is the Director General at WorldFish, Malaysia, focused on reducing poverty and hunger in developing countries through fisheries and aquaculture. Earlier, he was the Research Program Director for Aquaculture and the Acting Director for the Food Futures Flagship at the Commonwealth Science and Industrial Research Organization (CSIRO), Australia.

With more than 25 years of experience, he has authored more than 80 scientific publications on coral reef ecology, fisheries ecology, aquaculture biology, genetics, nutrition and environmental management. He serves as Associate Editor for the Journal of the World Aquaculture Society. In 2013, he won the Australian Innovation Challenge for his work on novel aquafeeds. In 2014, he was appointed as a Fellow of the World Aquaculture Society in recognition of his achievements in aquaculture research.

He holds a Ph.D. degree in Marine Biology from Sydney University and a B.Sc. from Bangor University.

**Director General, AVRDC**

Dr Yu-Tsai Huang, Chair of the AVRDC Board of Directors announced on 16 October the selection of Dr Marco Wopereis as the Director General of AVRDC – The World Vegetable Center. He will succeed Dr J.D.H. Keatinge the current Director General and will join on 21 April 2016.

Since November 2007, Dr Wopereis is the Deputy Director General and Director of Research for Development of the Africa Rice Center (AfricaRice).

He has worked in developing countries in Africa and Asia for the past 25 years. Throughout his career, he has applied research results to develop improved varieties, seed systems, decision support tools, and mechanization suited to the needs of small-scale producers, rural advisory services, and other end-users.

He contributed to national rice development strategies for 23 countries in Sub-Saharan Africa under the umbrella of the Coalition for African Rice Development, and he was instrumental in helping to establish a new network of 68 development hubs in 24 African countries to stimulate public-private partnerships along the rice value chain.

Dr Wopereis authored or co-authored more than 100 scientific papers, book chapters, conference proceedings and manuals. He received his bachelor’s and master’s degrees in soil science and soil fertilizer use and his doctorate in tropical agronomy from Wageningen University, The Netherlands.

**Director-General, DOA, Thailand**

Mr Somchai Charnnarongkul is Director General of Department of Agriculture (DOA), Ministry of Agriculture and Cooperatives (MOAC). He obtained his Master of Sciences (Agricultural Extension) degree from Kasetsart University, Bangkok, Thailand. He also obtained certificates in various fields, namely, the Practice of Trade Policy: Economics, Negotiations and Rules, John F. Kennedy School of Government, Harvard University, U.S.A.; Director Certification Class 122/2009, Thai Institute of Director, Thailand; National Defence 2009, National Defence College of Thailand; High Level Insurance, OIC Advance Insurance Institute, Thailand and High-Level Administrators of Justice, College of Justice, Judicial Training Institute, Thailand. He was Deputy-Director General of Department of Agriculture from 2003-2004, Deputy Secretary General of National Bureau of Agricultural Commodity and Food Standards from 2004-2007, Inspector General of Office of Permanent Secretary, MOAC from 2007-2008. Mr Somchai was Director General of Department of Agriculture from 2008-2010, Director General of Cooperative Promotion Department from 2010-2013. He was reassigned to be Inspector General of MOAC from 2013-2014 and appointed to be Deputy Permanent Secretary of MOAC from 2014-2015. He received several outstanding awards in the field of agricultural development.
Executive Director, BRAC

Dr Muhammad Musa joined as the Executive Director of Bangladesh Rural Advancement Committee (BRAC) on 1st June, 2015. A medical doctor and a public health specialist, he has specialised training in maternal and child nutrition, and disaster management.

Before joining BRAC, he worked for 32 years with CARE International as one of its senior international management professionals and spent 20 years working in Ethiopia, Uganda, Sudan, Tanzania, Thailand, India, Bangladesh and the Asia region.

He has long experience in strategic leadership, governing board management, executive-level management of large-scale operations, and humanitarian and social development programs. He specialises in people management, leadership development, conflict resolution, and organisational change management and has a proven track record in effective external relationship management, marketing, brand-building, communications, and fund raising. He has been a successful professional in bringing convergence of philanthropic approaches and entrepreneurial methodologies in creating sustainable development programming for achieving impact at large scale.

President, VAAS

Dr Trinh Khac Quang joined as President, Vietnam Academy of Agricultural Sciences (VAAS) in 2014. Prior to this, he served as Vice-President, VAAS and General Director of Fruit and Vegetable Research Institute; Director of Fruit and Vegetable Research Institute; Deputy Director, Department of Science and Technology (DOST), Ministry of Agriculture and Rural Development (MARD), Vietnam. He had been in-charge of research management at DOST, responsible for management of agricultural biotechnology research and biosafety, crop science research including plant protection and associated intellectual property and national breeding program. He was also a member of the group developing the national program for biotechnology research and development up to 2020. He also served as Research Coordinator and Head of Root and Tuber Crop Research Department, Food Crops Research Institute (FCRI) with responsibilities for research and breeding projects, seed production and technology transfer.

New APAARI Publications
• Development of Communication Strategies for Adoption of Agri-Biotechnology in the Asia-Pacific Region: Proceedings and Recommendations
• Success Stories on Information and Communication Technologies for Agriculture and Rural Development
• APAARI on CD

New APAARI Staff

Ms Martina Spisiakova joined APAARI as Knowledge Management Coordinator on 21 December 2015. She is a Slovak national and has over 15 years of international experience in knowledge management and other areas.

Earlier, she served as Knowledge Management Officer in the Centre for Alleviation of Poverty through Sustainable Agriculture (CAPSA) – a regional body of the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) – based in Bogor, Indonesia. She helped build the Network on Sustainable Agricultural Technologies and Improved Market Linkages (SATNET Asia) and also worked in the International Fund for Agricultural Development (IFAD) in Rome, Italy, in the area of knowledge management and communications. Ms Spisiakova holds a Master’s degree in Business Administration from Robert Kennedy College, Switzerland and a Bachelor degree in Social Sciences with Economics from The Open University, UK.

Ms Khattiya Ounjai joined APAARI as a Technical Assistant on 1st September 2015 and is assisting in all technical matters of APAARI and specifically providing support in the area of biotechnology to the Coordinator, the Asia-Pacific Consortium on Agricultural Biotechnology (APCoAB), a program under APAARI. She graduated from Mahidol University, Thailand in 2015 with a Bachelor of Science in Biotechnology.

Ms Thansita Thanaphatrujira joined APAARI in November, 2015. Her main responsibility is to provide administrative support to the Executive Secretary, APAARI and also assist in other office activities. Prior to joining APAARI, she worked as Marketing Manager, Hillsilver Exports (Thailand); UN FAO/IFAD Development Project, Bangkok; International Limited, Bangkok and Ampass Auto Mirror Company, Rayong. She possesses a B.A. degree in Professional Secretarial Sciences.
Outgoing APAARI Staff

Ms Chanerin Maneechansook, Program Assistant, left APAARI on 31 December, 2015 and joined United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP). APAARI takes this opportunity to thank Ms Chanerin for her cooperation and hard work and wishes her a great success in her new assignment.

Forthcoming APAARI Meetings/Workshops

- Policy Dialogue on Transforming towards Knowledge Based Agriculture in Southeast Asia, Laos, February/March 2016
- APAARI Executive Committee (EC) Meeting at Bangkok in April/May 2016
- APCoAB Steering Committee (SC) meeting at Bangkok in April/May 2016
- APARIS Steering Committee (SC) Meeting at Bangkok in April/May 2016

Forthcoming International Conferences/Events

- 33rd Regional Conference for Asia and the Pacific (APRC), 7-11 March 2016, Putrajaya, Malaysia
- Third Global Conference on Agricultural Research for Development, 5-8 April 2016, Johannesburg, South Africa.
- 3rd International Conference on Agriculture and Forestry 2016, 1-3 June 2016, Manila, Philippines
- 2nd Global Summit on Aquaculture & Fisheries July 11-13, 2016 Kuala Lumpur, Malaysia
- 1st International Agrobiodiversity Congress: Science, Technology, Policy and Partnership, 6-9 November 2016, New Delhi, India

APAARI Participation in Other Fora/Meetings

Dr Raghunath Ghodake, Executive Secretary, APAARI

- Regional Consultation on Agroforestry: The Way Forward at NASC Complex, DPS Marg, New Delhi; 8-10 October, 2015
- International Conference on Avian Influenza Prevention and Control at New Taipei City, Taiwan; 21-22 October 2015

Dr Bhag Mal, Senior Consultant, APAARI

- Regional Consultation on Agroforestry: The Way Forward at NASC Complex, DPS Marg, New Delhi; 8-10 October 2015

Dr J.L. Karihaloo, Senior Consultant, APAARI

- Regional Consultation on Agroforestry: The Way Forward at NASC Complex, DPS Marg, New Delhi; 8-10 October 2015
- National Dialogue on “Innovation Extension Systems for Farmers Empowerment” at New Delhi; 17-19 December 2015

Dr Vilasini Pillai, APCoAB Coordinator

- Multi-Country Observational Study Mission on Revitalizing Rural Economies for More Inclusive Development” from 14-18 September 2015, Taipei, Chinese Taipei
- International Symposium on Biopesticides & Biofertilizers for Sustainable Agriculture from 13-15 October 2015, Taipei, Chinese Taipei
- Stakeholder Workshop: Strategic Planning to Accelerate Agri-biotechnology Agenda in Malaysia, 27-28 October 2015.

Executive Committee

Chairman : Mr Anan Suwannarat
Vice-Chairman : Dr Abul Kalam Azad
Members : Mr David Shearer
Dr Reynaldo Ebora
Prof Arachchi Ariyaratne
Mr Uraia Waibuta
Dr Mark Holderness
Mr Tony Simons
Dr Muhammad Musa
Ms Esther Penunia

Executive Secretary : Dr Raghunath Ghodake

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