



COUNCIL OF AGRICULTURE  
EXECUTIVE YUAN, R.O.C.

## **Asia-Pacific Association of Agricultural Research Institutions**

and

## **Council of Agriculture, Taiwan**

Collaborative Program

## **Progress Report**

(January 1, 2018 to December 31, 2018)



## **Asia-Pacific Consortium on Agricultural Biotechnology and Bioresources (APCoAB)**

2<sup>nd</sup> & 4<sup>th</sup> Floor, FAO Annex Building, 202/1 Larn Luang Road, Pomprab Sattrupai

Bangkok 10100, Thailand

## Progress Report

(January 1, 2018 to December 31, 2018)

APAARI-COA collaborative program on biotechnology has been in operation since 2008 as the Asia-Pacific Consortium on Agricultural Biotechnology (APCoAB). Initially approved for three years (2008-2010) with a funding support of USD 35,000 per annum, the program was extended twice (2011-2013, 2014-2016) and funding raised to USD 50,000 per annum. In view of the excellent performance of this APAARI-COA collaboration in terms of the number and range of activities conducted and benefits brought to APAARI members and other participants by way of knowledge enhancement, development of practical experience, networking and opportunities for partnership development, it was decided by both APAARI and COA to continue the APCoAB program for another term. Therefore, the program was extended for 4 years i.e. from 2017 to 2020 with a total budget of USD 560,000 is to be shared equally (USD 280,000) by COA and APAARI and other partners. The commitment of COA to continue supporting this program was conveyed during the XVIII APCoAB Steering Committee Meeting, held on 31 October 2016 at Taichung City, Taiwan. As per recommendations of Executive Committee (EC; 2/2017) of APAARI, XIX Steering Committee of APCoAB and EC 1/2018 of APAARI, activities on conservation and sustainable use of bioresources were included. The program Asia-Pacific Consortium on Agricultural Biotechnology was renamed as 'Asia-Pacific Consortium on Agricultural Biotechnology and Bioresources' retaining the old acronym as 'APCoAB' and also the objectives of APCoAB were modified, which were approved in the meetings of XIX Steering Committee of APCoAB and EC (1/2018) of APAARI.

During XIX Steering Committee of APCoAB held on May 28, 2018 at Bangkok, COA committed to enhance the funding with effect from 2019 in view of inclusion of bioresources activities under APCoAB and suggested that a revised APAARI-COA collaborative proposal (APCoAB) should be submitted to COA. Consequently, a revised APAARI-COA proposal (2019-2022) was submitted to COA, which is under consideration.

During the year 2018, following activities were carried out:

### A. Expert Consultation/Conference/Workshop (5)

1. **Regional Expert Consultation on Agricultural Biotechnology - Scoping Partnership to Improve Livelihoods of Farmers in Asia-Pacific** was organized by APAARI, APCoAB in collaboration with Council of Agriculture (COA), Taiwan and Department of Agriculture (DOA), Thailand), Australian Centre for International Agricultural Research (ACIAR), Australia; Co-Sponsors - CGIAR Research Program - Grain Legumes and Dryland Cereals (CRP-GLDC),



International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) and Technical Support Partner Biotech Consortium India Limited (BCIL) in Bangkok, Thailand, on May 29-31, 2018. A total of 61 participants from 22 countries participated. Of the total participants, 28% were women researchers and policy makers.

Inaugural address was given by Dr Chung-Hsiu Hung, Director General, International Affairs Department, COA, Taiwan. While describing the purpose of the meeting, he emphasized that traditional methods are simply not sustainable enough to achieve food security for a rapidly growing population, therefore, role of modern science like agricultural biotechnology, Big Data, and the Internet of Things (IOT) become imperative to address the problems. He appreciated the contribution of APAARI and COA to serve the smallholder farmers in Asia-Pacific region.

Major recommendations emerged were categorized in (i) Priority Research areas, (ii) Capacity development, (iii) Infrastructure Development and Investment, (iv) Public Awareness, (v) Policy advocacy, and (vi) Possible Partnerships. For details please refer to Proceedings and Recommendations of Regional Expert Consultation on Agricultural biotechnology – Scoping Partnerships to Improve Livelihoods of Farmers in Asia and the Pacific (ISBN 978-616-7101-13-2) (2018).

2. **The III International Symposium on Plant Cryopreservation (CryoSymp 2018)** was

organized by the Department of Plant Science, Faculty of Science, Mahidol University, the International Society for Horticultural Science (ISHS) and with the support of the Plant Genetic Conservation Project, under the Royal Initiative of HRH Princess Maha Chakri Sirindhorn (RSPG), the Department of Agriculture (DOA), the Thailand Institute of Scientific and Technological Research (TISTR), the Asia-



Pacific Association of Agricultural Research Institutes (APAARI) and its program the Asia-Pacific Consortium on Agricultural Biotechnology and Bioresources (APCoAB) on March 26-28, 2018, in Bangkok, Thailand. The symposium attracted 114 participants from 25 countries around the world. The program comprised of three sessions - Session I: Research in Plant Cryopreservation, Session II: Cryobanking, and Session 3: Methods in Plant Cryopreservation. Three Invited lectures, 32 oral and 35 posters, related to various aspects of plant cryopreservation, were presented. The participants also visited the Pathum Thani Rice Research Center, Department of Rice, which conducts research on wild Thai rice and collects germplasm. After lunch at the Pathum Thani Rice Research Center, participants went to the National Center for Genetic Engineering and Biotechnology, National Science and Technology Development Agency, which has four thematic research programs, namely Agriculture and food, Health and medicine, Energy and environment, and Bioresource center and utilization.

Dr Rishi Tyagi, Coordinator, APCoAB, made a presentation on “Does cryopreservation stress impacts genotype integrity? A case study with germplasm of *Musa spp.*”. He served as the member of (i) International Advisory Committee and (ii) Scientific Committee of CryoSymp 2018. For details please refer to The Third International Symposium on Plant Cryopreservation CryoSymp 2018 - Book of Abstract (2018).

3. **6<sup>th</sup> Annual South Asia Biosafety Conference (SABC)** was organized under The South Asia Biosafety Program, ILSI Research Foundation, and Biotech Consortium India Limited (BCIL) on September 15-17, 2018 in Dhaka, Bangladesh. Amongst others, APAARI and APCoAB were also co-organizers of the Conference. A total of about 160 participants belonging to academia, government and public sector from 8 South Asian countries participated in the Conference. Of the total participants, 36% were women researchers or students of biotechnology.



4. **International Seminar on Conservation and Prospecting of Bioresources in the Asia-Pacific Region** was organized in collaboration with COA, Taiwan; Ministry of Foreign Affairs, Taiwan; National Taiwan University; and Academia Sinica, Taiwan on December 18-21, 2018 at Academia Sinica, Taipei. A total of 134 participants from 11 countries



International Seminar on Conservation and Prospecting of Bioresources in the Asia-Pacific Region  
December 18-20, 2018 Taipei, Taiwan

(Bangladesh, Fiji, India, Iran, Malaysia, New Caledonia, Samoa, Singapore, Sri Lanka, Taiwan and Thailand) of Asia-Pacific participated in the seminar. APAARI sponsored 10 speakers/panelists to participate in the seminar.

Opening remarks were presented by Dr James C. Liao, President, Academia Sinica, Taiwan; Dr Junne-Jih Chen, Director General, Taiwan; Agricultural Research Institute, COA, Taiwan; Mr Cheng-Maw Shih, Minister of Department of International Organizations, Ministry of Foreign Affairs (MOFA), Taiwan; Dr Ta-De Lin, Vice President, National Taiwan University, Taiwan; Dr Ravi Khetarpal, Executive Secretary, AP AARI, Thailand. Total six sessions, two panel discussions and one technical tour were organized.



Sessions included Keynote Lectures (4 presentations), Policies and Regulation of Bioresources in APR (6 presentations), Prospecting and Application of Bioresources in the APR (4 presentations), Application of CRISPER/Cas9 in Bioresources (2 presentations), Towards Successful Commercialization of Bioresources in Taiwan (4 presentations). In addition, two panel discussion on the above subject and a technical tour to Tea Research Station, Taoyua, Taiwan and Agricultural Technology Research Institute, HsinChu, Taiwan were also organized.

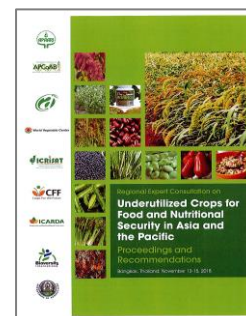


**5. APAARI Biotechnology Communication Strategy and its Potential for Adoption – An Online Survey** was conducted. A simple questionnaire comprising 20 questions was developed and distributed to the 24 participants who attended the workshop on “Development of Communication Strategies for Adoption of Agri-Biotechnology in the Asia-Pacific Region”, organized by APAARI-APCoAB on September 28-29, 2015. This questionnaire was designed to get the participants feedback on the impact of APAARI-APCoAB communication strategies for agri-biotechnology. Out of total participants, 45% were women researchers and policy makers.

- i. About 55% of the participants are involved in the development of effective communication strategies in their organization.
- ii. Most of the participants (82%) reported a major improvement in their knowledge and skills in communication in agri-biotechnology.
- iii. Most of the participants (90-100%) stated that the workshop experience helped their organizations to create awareness and promote agri-biotechnology, and that they are able to implement and practice the knowledge and skills gained during the workshop.
- iv. Some 36% of the participants reported that organizations got a formal recognition award by adopting communication strategies suggested during the workshop.
- v. About 45-66% of the participants stated that it is difficult to communicate with politicians, policy makers/regulators and media persons about agri-biotechnology.
- vi. The majority of participants (64%) said they would have benefited from networking after the workshop, to exchange experience and ideas among other participants.
- vii. About 45-55% participants would like, in future, to attend stakeholder-, biotechnology sector- and region-specific workshops on biosafety, gene editing, trait discovery, molecular breeding, networking and partnership, application of biotechnology for conservation and use of bioresources and biofertilizers.

## B. Publications (8)

1. **Proceedings and Recommendation of Regional Expert Consultation on Underutilized Crops for Food and Nutrition Security in Asia and the Pacific (ISBN 978-616-7101-09-5 (2018), pp ix + 56.** This includes the Executive Summary, the Proceedings of 5 Technical Sessions, 4 Working Groups and a Plenary Session, in addition to the Inaugural Address. Major recommendations emerged out from the deliberations and were categorized – Research and Education, Development, Policy, and Regional Cooperation and Networking. Nine Thematic and six Strategic Papers, and Country Reports of underutilized crops from 16 countries of the Asia-Pacific region, which were presented during the Expert Consultation, were compiled and edited.

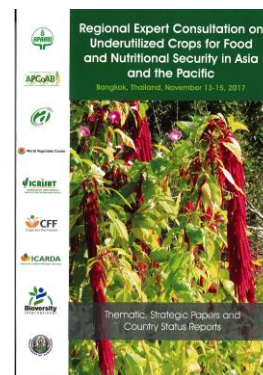


This publication can be accessed through APAARI/APCoAB website:

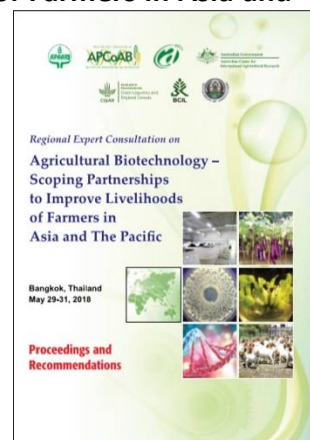
<http://www.apaari.org/web/latest-publications/> <http://www.apaari.org/web/our-projects/apcoab/publications/>

The presentations were shared by the respective participants and can be accessed here: <https://www.slideshare.net/apaari/presentations>  
<https://www.slideshare.net/apaari/presentations/2>

2. **Thematic, Strategic Papers and Country Status Reports presented during Regional Expert Consultation on Underutilized Crops for Food and Nutritional Security in Asia and the Pacific, held on November 13-15, 2017 (ISBN 978-616-7101-10-1) (2018), x + 349p.** This publication comprised of Thematic papers (9), Strategic Papers (6) and Country Status Reports of countries (15) - South Asia (6), South East Asia (6) and the Pacific countries (3) on underutilized crops. This publication can be accessed through APAARI/APCoAB website: <http://www.apaari.org/web/latest-publications/>  
<http://www.apaari.org/web/our-projects/apcoab/publications/>



3. **Proceedings and Recommendations of Regional Expert Consultation on Agricultural biotechnology – Scoping Partnerships to Improve Livelihoods of Farmers in Asia and the Pacific (ISBN 978-616-7101-13-2) (2018), xviii-62p.** This publication contains executive summary, the Proceedings of 4 Technical Sessions, 5 Working Groups and a Plenary Session, and major recommendations, in addition to the Inaugural Address. Major recommendations emerged out from the deliberations and were categorized – Priority Research Areas, Capacity development, Infrastructure Development and Investment, Public Awareness, Policy Advocacy and Possible

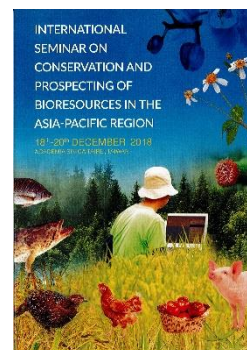


Partnership. This can be accessed through APCoAB website: [http://www.apaari.org/web/wp-content/uploads/downloads/2018/Agricultural%20Biotechnology%20Scoping%20Proceedings%20&%20Recommendations\\_10-12-2018\\_2.pdf](http://www.apaari.org/web/wp-content/uploads/downloads/2018/Agricultural%20Biotechnology%20Scoping%20Proceedings%20&%20Recommendations_10-12-2018_2.pdf)

4. **The Third International Symposium on Plant Cryopreservation CryoSymp 2018 - Book of Abstract (2018)**. This publication comprises of the oral and poster presentations were published comprising 35 abstracts of oral presentations by 32 speakers and 39 posters on various aspects of cryopreservation of plant genetic resources. These presentations were made during Technical Sessions - Invited Oral Session, Research in Plant Conservation, Cryobanking and Methods in Plant Cryopreservation.



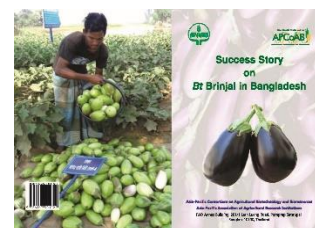
5. **International Seminar on Conservation and Prospecting of Bioresources in the Asia-pacific Region – Biography and Abstracts, pp 59**. This publication was made by Academia Sinica containing biography of the speakers and the abstracts of the papers presented during the Seminar, Technical Program, and other logistic details.



6. **Asia-Pacific Consortium of Agricultural Biotechnology and Bioresources (APCoAB) Brochure (2018)**. It contains the mission, genesis, revised objectives, recent activities and publications, details of Steering Committee and supporters and facilitators of APCoAB.



7. **Success Story on Bt Brinjal in Bangladesh (ISBN 978-616-710-112-5) (2018), xvii+39p**. A document on “Success Story on *Bt* Brinjal in Bangladesh” has been published. It comprised the general information on agricultural biotechnology, regulatory process, releasing process of *Bt* brinjal, inception and generation advancement of *Bt* brinjal, research initiatives at BARI, *Bt* brinjal controversy, seed production on *Bt* brinjal varieties, distribution of seedlings, progress on *Bt* brinjal cultivation in the farmers’ fields and commercialization, farmers’ view and consumers’ perception about *Bt* brinjal in Bangladesh. This can be accessed through APCoAB website:



<http://www.apaari.org/web/wp-content/uploads/downloads/2018/Bt%20Brinjal%20in%20Bangladesh%20final.pdf>

8. **Proceedings of APCoAB Steering Committee Meeting, held at Bangkok, Thailand, (2018), 35p.** The APCoAB Steering Committee Meeting was held on May 28, 2018 at Bangkok. The Proceedings contains agenda of meeting, Action taken report, progress report under APCoAB (Nov 2016 to April 2018), and revised work plan of 2018. It can accessed through APCoAB website: [http://www.apaari.org/web/wp-](http://www.apaari.org/web/wp-content/uploads/downloads/2018/Proceeding%20of%20XIX%20APCoAB%20Steering%20Committee%20Meeting%202018.pdf)



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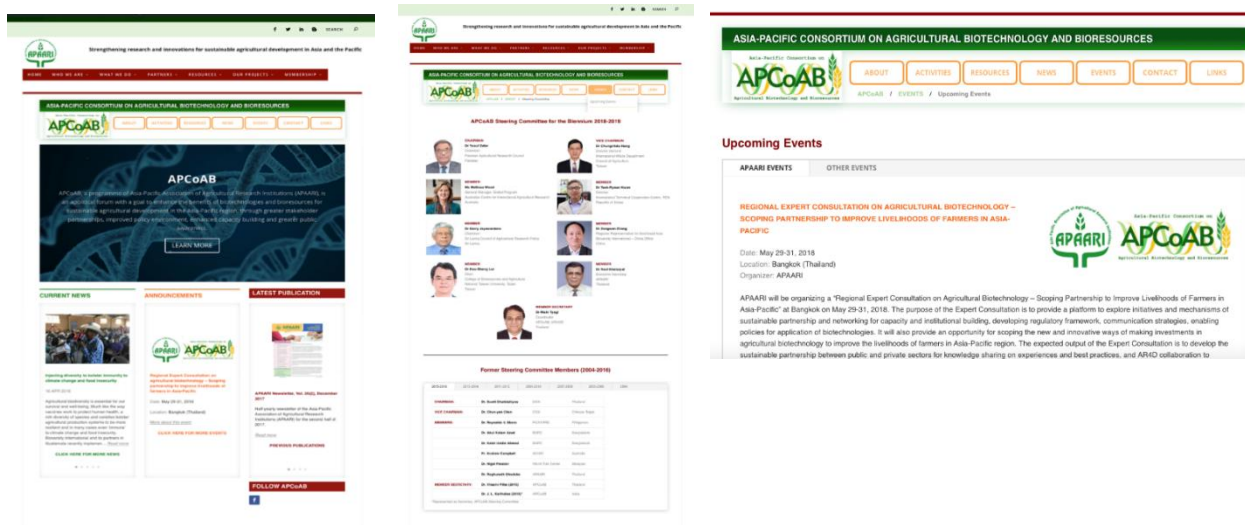
### Publications in Press (1)

9. Strategic Papers and Country Status Reports presented during Regional Expert Consultation on Agricultural Biotechnology - Scoping Partnership to Improve Livelihoods of Farmers in Asia-Pacific, held in Bangkok, Thailand, May 29-31, 2018 (in press).

### C. APCoAB Website

- (i) The Home Page has been re-designed and the new menu and breadcrumb have been implemented on the 72 pages and subpages of the APCoAB website. The website has been merged with APAARI website but a separate domain ([www.apcoab.org](http://www.apcoab.org)) for APCoAB is maintained as per the recommendation of EC.
- (ii) Update and redesign of dormant Sub-pages – Institutional database (319 institutes of 36 countries); International Organizations, Seed Companies, NGOs, and Miscellaneous (72 organizations) were completed.
- (iii) New pages for – Steering Committee (Current and past 12 years), News (Current and Archives; Biotechnology and Bioresources), Events (Upcoming and Past; APAARI and Others), were created.
- (iv) Existing other Databases (Experts, Biosafety, Educational Institutions, Publications, Event Proceedings) are being updated.





#### D. Participation of Coordinator, APCoAB in Meetings Organized by Other Organizations (9)

- (i) Facilitator of Session IV: Policy Dialogue Scaling Conservation Agriculture in Regional Policy Dialogue on Scaling Conservation Agriculture for Sustainable Intensification (CASI) in South Asia, organized by ACIAR and TAAS, in Dhaka, Bangladesh, September 8-9, 2017.
- (ii) FAO Regional Meeting on Agricultural Biotechnologies in Sustainable Food Systems and Nutrition in Asia-Pacific, organized by FAO-RAP, in Kuala Lumpur, Malaysia, September 11-13, 2017.
- (iii) Sustainable Agro Food Business Forum (SABF), organized by ESCAP, AFMA, EBAC, in Bangkok, Thailand, September 26-27, 2017.
- (iv) Workshop on Sustainable Branding – Coffee and Beyond (SBCB), organized by Agricultural and Food Marketing Association for Asia and the Pacific (AFMA), in Bangkok, Thailand, March 10, 2018.
- (v) Presented a paper on “Does cryopreservation impacts genetic integrity? A case study of banana cryopreservation” in CryoSypm 2018, organized by Mahidol University, APAARI-APCoAB and others, in Bangkok, Thailand, March 26-29, 2018.



Participants of SABF



Participants of SBCB



Participants of CryoSypm 2018

- (vi) Brainstorming on ‘Harnessing the Intellectual Property Rights for Agricultural Growth, New Delhi, India, July 27, 2018.
- (vii) Presented a paper on ‘Current Status of Agricultural Biotechnology in the APEC Economies”, in APEC High Level Policy Dialogue on Agricultural Biotechnology (APEC HLPDAB), Port Moresby, Papua New Guinea, August 5, 2018.
- (viii) 22<sup>nd</sup> Agricultural Technical Cooperation Working Group (ATCWG) Meeting, Port Moresby, Papua New Guinea, August 6, 2018.
- (ix) ABAC Food Security Symposium, Port Moresby, Papua New Guinea, August 6, 2018.

6<sup>th</sup> South Asia Biosafety Conference

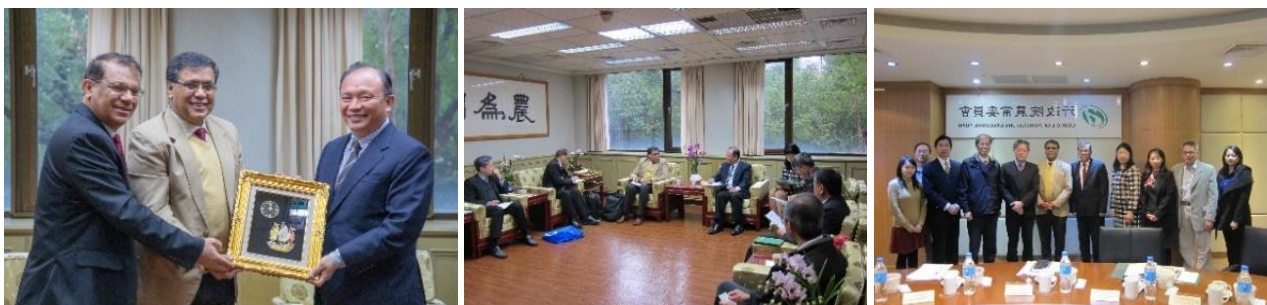
APEC HLPDAB

5<sup>th</sup> International Rice Congress

- (x) Chaired a Plenary Session I: Biosafety Regulation and Capacity Building Initiatives in South Asia, in 6<sup>th</sup> Annual Biosafety Conference, Dhaka, Bangladesh, September 5-8, 2018.
- (xi) 5<sup>th</sup> International Rice Congress 2018, organized by IRRI, FAO, AVA and others, Singapore, October 15-17, 2018.

## E. Networking and Partnerships

- (i) COA, Taiwan to strengthen the collaboration with COA and International Cooperation and Development Fund, January 5, 2018.



Meeting with Hon'ble Minister of COA and other officials of different organizations in Taiwan

- (ii) Discussion with officials from Bioversity International, ISAAA, SPC, ICRISAT, NACA, ICGEB, USAID, SLCARP, MARDI, ABRC, Green Innovation Biotechnology and BCIL for possible collaboration in future activities, May 30-June 1, 2018.
- (iii) USAID – Bangkok office along with USAID – Washington official for future collaboration, June 5, 2018.
- (iv) Kasetsart University and to DOA regarding organization of Regional Conference on soil and Plant Health, June 2018.
- (v) MARDI, Selangor, Malaysia with regard to finalization of the arrangements of the ‘Workshop on Underutilized Animal Resources and their Amelioration’, July 17, 2018.
- (vi) Crops for Future (CFF), Selangor, Malaysia, to discuss about the collaboration to develop database of underutilized crops and to develop a project on Centre of Excellence for Underutilized Crops, July 17, 2018.
- (vii) Human Life advancement Foundation (HLAF), Kuala Lumpur, Malaysia, to explore the possible collaboration between APAARI and HLAF, July 18, 2018.
- (viii) CABI to discuss about the organization of the regional conference on plant and soil health in 2018 at Bangkok, July 17-18, 2018.
- (ix) BCIL to discuss about the collaborative activities with BCIL and Biosafety Conference in Dhaka to be held on 15-17 September 2018 and finalization of MoU between APAARI and BCIL, India, July 24, 2018.
- (x) Director General, Research and Innovation System (RIS) for Developing Countries, India, for future South-South collaboration in agri-biotechnology, New Delhi, India, July 25, 2018.
- (xi) Advisor, Department of Biotechnology, India; Executive Director, Alliance for Agri Innovations, India, July 27, 2018.
- (xii) President Bioseed South East Asia, for possible collaboration in agri-biotechnology, New Delhi, India, July 27, 2018.
- (xiii) Discussed about collaborative projects with senior officials of NARI, PNG and SPC, Fiji, Port Moresby, Papua New Guinea, August 10, 2018.
- (xiv) Executive Director and Council of Directors of PCAARRD, Los Banos, Philippines, August 14, 2018.



Discussion at PCAARRD,  
Philippines



APAARI delegation at MARDI,  
Malaysia



APAARI deligation at CFF,  
Malyasia

(xv) Director and scientists of National Institute of Molecular Biology and Biotechnology Institute about biofertilizers and biopesticides, August 14, 2018.

(xvi) Officials of SEARCA-BIC for developing MoU and other activities related to agribiotechnology, August 14, 2018.

**Memorandum of Understanding (MoU):** Two MoUs were signed between APAARI and (i) International Centre for Genetic Engineering and Biotechnology, Italy, and (ii) Biotech Consortium India Limited, India, to collaborate for capacity building and knowledge management in areas of agricultural biotechnology.

#### **APAARI Membership Pursued and Secured**

- (i) Mahidol University, Bangkok, Thailand (Affiliate Member)
- (ii) Federation of Seed Industry of India (FSII), India (Associate Member)
- (iii) Graduate Education and Institutional Development (Associate Membership, being pursued)

#### **F. Project Proposal Developed and Submitted**

- (i) APAARI-COA collaborative program was revised for 2019-2022 and submitted to COA, Taiwan. (USD 1,059,044)
- (ii) Capacity enhancement in agricultural biotechnologies and their applications for conservation and use of bioresources for sustainable agri-food system in the Pacific and submitted to ICDF (USD 2,468,260)
- (iii) Capacity Building in Commercial Plant Tissue Culture Sector for Addressing the Need of Quality Planting Materials of Horticultural Crops in Least Developed Countries (LDCs) of South Asia and submitted to ICDF (USD 1,737,363)



### G. Work Plan of APCoAB for 2019

Area	Activities
Expert Consultation/ High Level Policy Dialogue	<ul style="list-style-type: none"> <li>• Regional Expert Consultation: New genome manipulation technologies and their implications on biosafety regulation Co-organizer: PCAARRD/ICRISAT/ACIAR (April 2019)</li> </ul>
Symposia/trainings/workshops	<ul style="list-style-type: none"> <li>• Underutilized animal resources of Asia-Pacific and their amelioration (Workshop) (March 2019) Co-organizer: MARDI</li> <li>• Underutilized fish and marine resources of Asia-Pacific and their amelioration (Workshop) (May 2019) Co-organizer: SLCARP/World Fish Centre/ICAR</li> <li>• Conservation and utilization of agricultural important microbial genetic resources (Workshop) (July-August 2019)* Co-organizers: ICAR/PCAARRD/MARDI</li> <li>• Gene editing technologies for crop and animal improvement (Training) (Sep-Oct 2019) Co-organizer: ICRISAT/RDA/JIRCAS</li> <li>• In vitro conservation and cryopreservation of crop germplasm (Training) (Oct-Nov. 2019) Co-organizers: ICAR/COA/Bioversity International</li> <li>• The First International Symposium on Botanical Gardens and Landscapes (BGL 2019) (December 2019)* Co-organizers: Mahidol University, ISHS</li> </ul>
Steering Committee of APCoAB	<ul style="list-style-type: none"> <li>• Steering Committee Meeting of APCoAB (April-May 2019)</li> </ul>
Publication of proceedings/status reports/success stories	<ul style="list-style-type: none"> <li>• Publications on training manual (2), Proceedings of Expert Consultation and Workshops (3+2*) (March-December 2019)</li> </ul>

	<ul style="list-style-type: none"> <li>• Three Status report/success stories are targeted - (GM Maize in Philippines, Rice Biotechnology in Asia-Pacific*, Banana Tissue Culture in India*) (March 2019)</li> </ul>
APCoAB website	<ul style="list-style-type: none"> <li>• Regular updates on agricultural biotechnology and bioresources developments, news and events of specific relevance to Asia-Pacific</li> <li>• Update of existing databases. Regular updates of other content and additional databases*</li> </ul>
One activity as suggested by COA	To be decided in consultation with COA (Nov-Dec 2019)

\*In view of expanded scope of APCoAB, two Workshops/Trainings, 4 publications, in addition to already approved activities have been planned for the year 2019, subject to the availability of resources (finance and technical staff) as proposed under revised APAARI-COA collaborative program.

**H. Summary of Account Statement of APCoAB (January 1, 2018-December 31, 2018)**

		(in USD)
<b>Receipts</b>		
<b>COA, Taiwan</b>		70,000.00
<b>APAARI and Partner Contribution</b>		
Balance brought forward APAARI (APCoAB)	25,779.00	
ACIAR contribution	15,000.00	
Sponsorship by ICRISAT	5,000.00	
APAARI contribution	57,689.23	103,468.23
<b>Total</b>		<b>173,438.23</b>
<b>Payments</b>		
<b>Salary costs</b>		74,040.13
<b>Other Direct Costs</b>		
Meetings/Trainings/Workshop	53,026.72	
Consultancy	10,820.00	
Telephone	500.69	
General communication	230.18	
Computer Hardware and Software	188.62	
Sponsorship	7,000.00	
Courier	1,420.34	
Hospitality	643.70	
Publications	10,856.60	
Promotional Material	186.56	
Miscellaneous Charges	801.72	
Facilities from Secretariat	13,752.98	99,428.10
<b>Total</b>		<b>173,438.23</b>

**Table 2. Summary of Expected Income and Expected Expenditure for the APCoAB activities during January 1, 2019-December 31, 2019**

	USD
<b>Receipts</b>	
<b>COA, Taiwan</b>	70,000.00
<b>APAARI contribution</b>	
ACIAR	15,000.00
APAARI	70,000.00
Expected Sponsorship	20,000.00
<b>Total</b>	<b>175,000.00</b>
<b>Payments</b>	
<b>Coordinator Salary costs</b>	76,400.00
<b>Other direct costs</b>	
Meetings/Trainings/Workshop	100,000.00
Publications/printing etc.	20,000.00
Consultancy and APCoAB technical staff salary	35,000.00
Telephone and other communication	1000.00
Travel	7,000.00
Computer hardware and software - Laptop	2,500.00
Facilities from Secretariat	15,000.00
Miscellaneous	4,000.00
<b>Total</b>	<b>260,900.00</b>
<b>*Difference between Expected Income and Expected Expenditure (Additional budget required)</b>	<b>85,900.00</b>

\*Difference is expected to be met by additional budget granted by COA during 2019