Editorial

The Asia-Pacific region encompassing South, Southeast, East Asia and the Pacific sub-regions, is the largest supplier of the world’s food and agricultural products. It houses about 58% of the world’s population but has only 38% of the world’s agricultural land. Attainment of Millennium Development Goals (MDGs), particularly alleviating poverty, assuring food security and environmental sustainability, against the background of declining natural resources, together with changing climate scenario, presents a major challenge to the planners and agricultural scientists.

Fortunately, the Asia-Pacific region is the center of diversity of many important species of crops, livestock and forest trees. It is well recognized that the genetic diversity is the basic source material for crop and animal improvement, whether based on conventional breeding or biotechnology. Further, resource poor farmers in the region are largely dependent on agrobiodiversity of minor crops, wild relatives of plant and animal species for their food security and livelihood.

Several scientific studies have alerted us about the continuing loss of agrobiodiversity in the region due to human and natural causes. At the same time, the large scale adoption of a few improved varieties has resulted in displacement of several traditional varieties from farmers’ fields. Also, the traditional knowledge associated with the use of old varieties/landraces is disappearing fast. In view of these concerns, efforts have been made by various international and regional organizations and some national governments towards collecting, documenting and conserving agricultural genetic resources that have culminated in the establishment of genebanks in some international centres and National Agricultural Research Systems (NARS). However, the need for further strengthening these efforts particularly at the regional level is widely felt. In view of its importance, the United Nations has declared 2010 as the International Year of Biodiversity.

APAARI, in collaboration with its stakeholders comprising NARS, CGIAR centers, ARIs, GFAR and CSOs has been engaged in reviewing the role and direction of agricultural R&D to address food and livelihood security in the Asia-Pacific region. As a part of these on-going efforts, it is proposed to hold an International Symposium on “Sustainable Agricultural Development and Use of Agrobiodiversity in the Asia-Pacific Region”, in partnership with Rural Development Administration (RDA), Republic of Korea, Bioversity International and other International Organizations (FAO, CIMMYT, ICARISAT, ICARDA, IRRI) from 13 to 15 October, 2010 in Suwon. The symposium will provide an opportunity to review, identify and redefine the role and direction of agricultural R&D for conservation and use of agrobiodiversity for sustainable agricultural development. It will also help in deciding a ‘Way Forward’ for access and benefit sharing of genetic resources, being common heritage of humankind.

We hope that this consultation will evoke required awareness concerning genetic resource management in the region.

Editors
The first Global Conference on Agricultural Research for Development (GCARD) was held during 28-31 March, 2010 in Montpellier, France by the Global Forum on Agricultural Research (GFAR) and other partners with a huge participation of more than 900 delegates representing national agricultural institutions, governments, international organizations, CGI institutions, regional fora, donor agencies, banks, NGOs, farmers’ representatives, private sector etc., from all over the world. Lively panel discussions on topics like: Reshaping agricultural research systems to meet the needs of the poor; Partnership for a better future; and Investing for a better future were held through high-level dialogue, focusing on changes and actions required by global, regional and national institutions for agricultural research to have greater development impact for the poor.

All the Regional Fora viz., APAARI, CACAARI, AARINENA, FORAGRO, NAFED, FARA and EFARD presented issues and challenges identified in the regional consultations followed by open discussion and inter-regional dialogue on common themes and needs identified around the world including a plenary of questions and answers. CGIAR Consortium plenary presented the CGIAR perspectives on partnerships, outlining the challenges and opportunities based on concrete examples of the CGIAR’s work with regional partners. During the discussion session, participants highlighted low involvement of farmers in the design and implementation of programs and suggested that the Centers include more farmers on their boards. The GCARD Global Author Team presented report on Transforming Agricultural Research for Development which synthesized the regional consultations. The report provides a roadmap for the immediate reforms of what it terms a currently “fragmented global system of research and development.”

Eight parallel sessions organized mapping the proposed programmatic areas to regional development demands and the roles and accountabilities expected of the CGIAR and diverse stakeholders in implementation of collective actions. Parallel sessions were also held on the themes such as: improving partnerships; addressing gender for inclusive development; capacity development; role of the fast-growing economies as new providers; knowledge, information and advice in agri-food systems: opportunities and actions; thinking forward: better predicting and addressing future needs; better benefiting the poor through public-private partnerships for innovation and action; and managing risks to farmers in a time of change. These sessions focused on what needs to change for agricultural research and extension systems to be more effective agents of development and presented systematicategic reforms, action plan and framework components, generated from the GCARD consultations and provided inputs to synthesize the roadmap presented on the final day. The outcomes of these sessions were shared in the plenary session.

The RoadMAP (Montpellier Action Plan) has set out pathways for reform and reorientation of agricultural research systems and innovation pathways, against which all constituencies of GFAR can review and assess collective progress and expected change through successive GCARD meetings.

APAARI at the GCARD

APAARI, as a regional forum, has been actively associated with GFAR in facilitating the GCARD process in the Asia-Pacific region in collaboration with the Asian Development Bank (ADB) by involving all stakeholders of ARD in the region. It has played a catalytic role in facilitating the GCARD process in the Asia-Pacific region which includes coordination of e-consultation on agricultural research for development involving more than 300 participants; preparation of 3 sub-regional reports (by consultants Dr. Mruthyunjaya and Dr. P. Kumar for South Asia; Dr. David Raitzer et al., for Southeast Asia; and Dr. Alan Quartermain for the Pacific) and preparation of Regional Report on Agricultural Research for Development in the Asia-Pacific (by the lead consultant Dr. R.B. Singh). It successfully organized Face to Face meeting during 30-31 October, 2009 involving 75 ARD stakeholders from 17 countries and representing APAARI member NARS, CGIAR, IARCs, GFAR, ARIs, Universities, NGOs, Farmers and Farmers’ Organisations, private sector and donors organizations. An important outcome of the regional meeting was a joint Bangkok Declaration that reflects the collective thinking of stakeholders from the region.
At the GCARD Conference, Dr. Raj Paroda, Executive Secretary, APAARI made presentation on “Reorienting Agricultural Research for Development in Asia-Pacific: The Way Ahead” focusing on issues that emerged from the consultations made at the regional level, which was well received and appreciated. He emphasized that accelerated science and innovation-based agricultural growth must be inclusive and it must address the needs and aspirations of resource poor smallholder farmers of the Asia-Pacific region. Highlights of his presentation are as follows:

♦ The main feedback from e-consultation included: AR4D to focus on the development needs of resource-poor smallholders, it should be demand driven and address poverty, hunger and concerns of poor producers and consumers, address nutritional security especially of women and children, and maximize out-scaling of innovations through effective TOT and new partnerships involving key stakeholders (especially Civil Society Organisations).

♦ The key messages from the Asia-Pacific region included: re-orientation of AR4D agenda with small farm holders, poor producers, poor consumers as clients; use of ecosystem framework with focus on natural resources management especially land and water; give priority to climate change with emphasis on both adaptation and mitigation; and pursue holistic food supply chain approach. It should also focus on cross cutting areas like human resources development, socio-economic and policy research, and promoting partnership. It should adopt a twin-pillar strategy consisting of germplasm improvement and biotechnology and NRM to promote holistic farming systems approach.

♦ The AR4D agenda is stated in terms of increasing productivity, improving value chain and increased resilience. For increasing productivity which appeared to be a specific target by the 3 sub-regions the areas of food staples, diversified crops and livestock need special attention. Similarly, for value chain improvement, weak links in the chain are identified as infrastructure and networks/partnerships. To increase resilience against climate changes and economic shocks, strategy/activities have been identified for each one of 3 sub-regions.

♦ The emphasis should be not business as usual; focus on innovation partnerships and networking with particular reference to out-scaling of innovations in a participatory mode, and linkage of farmers to markets through value chain development and innovative institutions like Farmers’ Self Help Groups, producer companies, cooperatives etc.

♦ The success stories should be effectively used to spread technology to wider areas as in the case of hybrid rice in China, single cross and QPM hybrids of maize in India, Bt cotton in India, and conservation agriculture in the Indo-Gangetic Plains.

♦ To further promote AR4D, aggressive advocacy for increased AR4D funding of at least 1% of AgGDP by all developing countries has been advocated. For donor support, South Asia and the Pacific Island countries should receive immediate attention, whereas donor perception needs change for addressing the needs identified by regional fora, and stakeholders should be involved in research planning, implementation and monitoring. The new focus suggested will contribute to achieve in particular the MDGs 1, 7 and 8.

♦ It was concluded that agricultural development in Asia-Pacific will liberate the region from hunger, malnutrition and poverty and bridge the widening income divide between farmers and non farmers. But the new challenges can be effectively addressed if we partner with new commitments to upscale and outscale innovations. For full presentation, please visit: www.apaari.org

Dr. Raj Paroda also made a Statement on behalf of all Regional Fora on Emerging Role of Fast Growing Economies (BRIC) in Global Research for Development. APAARI also distributed the proceedings of the Face to Face meeting, Bangkok Declaration and a CD of publications comprising all reports related to GCARD process in the Asia-Pacific region.

### Following the Montpellier Road Map

In a statement, Dr. Mark Holderness, Executive Secretary, GFAR outlined the outcome of GCARD 2010 as:

The major outcome is the “Montpellier RoadMAP,” which provides a framework for linking science and innovation to the needs of farmers and the rural poor. It shows possible ways forward and offers possible commitments in our effort to shift the focus of agricultural research for development towards the poor farmer.

The conference provided a unique opportunity to engage with a broad cross section of stakeholders, and participants from the CGIAR greatly valued the constructive dialogues. There was a consensus that the concepts offered by the conference broadly matched those that were put forward by the CGIAR throughout its reform process. In following upon the conference, the CGIAR Consortium is taking appropriate action as to how the new Mega Programs will fit.

There is also the need to move from the global discussion towards an analysis of what the suggested interventions mean for each region and country. This means going back to the regional level and letting the regional fora serve as the vehicle for further consultation and action. An essential task for GFAR is to continue strengthening all regional fora.
APAARI at FAO Technical Conference on Agricultural Biotechnologies in Developing Countries

The FAO Technical Conference on Agricultural Biotechnologies in Developing Countries: Options and opportunities in crops, forestry, livestock, fisheries and agro-industry to face the challenges of food insecurity and climate change (ABDC-10) was held in Guadalajara, Mexico on 1-4 March, 2010. APAARI was invited to organize the Asia-Pacific Region specific session held on 3 March. On behalf of APAARI, Dr. J.L. Karihaloo, Coordinator APCoAB organized the background documents and the proceedings of the session. Prof. Sudhir Sopory, ICGEB served as the facilitator, Dr. Karihaloo and Dr. Chanda Nimbkar, India as panelists and Dr. Tashi Samdup, Bhutan as the Rapporteur of the session.

Two introductory presentations made by Dr. Karihaloo and Dr. Nimbkar highlighted some successes in the field level application of biotechnology in crops, livestock, and fish and aquaculture in the region. These include application of micropropagation, marker aided selection, mutation and haploidy breeding, and GM technology in crops with proven benefits to farmers and other stakeholders. Similarly, in livestock sector, cryopreservation and artificial insemination have been adopted with success in several countries and have resulted in improved milk yields. Biotechnological tools are being used extensively in the production of vaccines and diagnostics.

During the discussion, the participants recounted more success stories, also mentioning that there are considerable strengths in biotechnology R&D in some Asia-Pacific countries, including region based international centres, which need to be harnessed for the benefit of the entire region. SWOT analysis revealed following constraints:

- Policy support not very conducive in many countries
- Limited and unsustained funding for biotechnology R&D
- Limited capacity (technology, technology adaptation and adoption, regulatory & IP issues, communication) in many countries, especially in small island nations
- Less attention being paid to livestock and fishery biotechnology
- Limited public awareness and difficulty in dealing with IP issues
- Regulatory management systems need streamlining

Based on an in-depth analysis of the SWOTs, the following recommendations were made for priority action:

**Creating Enabling Environment:**

- Extend and enhance policy and funding support to biotechnology R&D
- Adopt need-based biotechnology tools and techniques, and integrated strategies and package of practices to improve small farm-level productivity and profitability
- Adopt IP and benefit sharing policies appropriate to the need to protect farmers’ and consumers’ interests

**Building Capacity:**

- Strengthen, with support from FAO and other donor agencies, some existing national institutions to serve as Regional Hubs for sustained capacity building, especially in education
- Collaborate in regional and interregional capacity building through support of NARS, CG centers, ICGEB and regional fora like APAARI

**Improving Regulatory Management:**

- Adopt biosafety regulatory systems based on robust science and transparent approval processes
- Facilitate transboundary movement of biotechnology products through bilateral and regional arrangements including agreed biosafety information requirements and data acceptance

**Enhancing Awareness:**

- Develop educational tools, status reports and web-based information systems
- Include biotechnology and agriculture oriented courses in school syllabi
- Train scientists not just in the field of biotechnology but also on issues of agriculture and food security, environment safety and in communication skills
- Organize dialogues between scientists, CSOs, farmer organisations and consumer groups

**Strengthening Linkages:**

- Regional linkages within the Asia-Pacific region; south-south linkages; north-south linkages; public-private linkages; public-public linkages
- Draw on existing regional fora like APAARI, AARINENA, FARA and networks to develop linkages
- Conduct workshops to define available resources and needs, followed by mutually agreed work plans

The third meeting of the APAARI Executive Committee was held on 24 April, 2010 at the National Agricultural Science Centre (NASC) Complex, New Delhi, India. It was hosted by the Indian Council of Agricultural Research (ICAR). Dr. Abd Shukor Abd Rahman, Chairman of the Executive Committee presided over the meeting.

Dr. Raj Paroda, Executive Secretary welcomed the Chairman, members and other invitees and extended his gratitude to Dr. S. Ayyappan, Director General, ICAR, and Vice Chairman of the Executive Committee for hosting the meeting.

In his opening address, Dr. Abd Shukor appreciated the progress made by APAARI and commended the pivotal role played during the GCARD Conference. He expressed specific concern about the least developing countries in the region where the ARD efforts still fall far short of the desired level. He felt that APAARI needs to explore opportunities for a collective endeavour of its members for donor support to ARD in the Asia-Pacific region.

In the introductory remarks, Dr. S. Ayyappan was impressed with the progress made by APAARI and conveyed willingness to host an Expert Consultation in near future on Transboundary Pests and Diseases in India. Dr. Raghunath Ghodake, Director General of NARI, Papua New Guinea shared his experience of Workshop on Fast Growing Economies’ Role in Global Agricultural Research for Development held by the Chinese Academy of Agricultural Sciences (CAAS) and the Global Forum on Agricultural Research (GFAR) in Beijing from 8-10 February, 2010. Dr. Robert Zeigler, Director General, IRRI assured to facilitate participation of APAARI in the ASEAN Forum. Mr. Raul Montemayor, IFAP assured collaboration between IFAP (Asia) and APAARI. Mr. Raju Barwale of Mahyco Seed Company desired more collaboration and involvement of private sector in future activities and offered funding support for the publication on Bt Brinjal by APCoAB.

The Committee approved the proceedings of the last Executive Committee Meeting held on 26 October, 2009 in Taichung, Chinese Taipei. Dr. Raj Paroda briefed the members on the action taken and the progress of activities.

It was noted that the Rural Development Administration (RDA), the Republic of Korea has confirmed the hosting of “International Symposium on Sustainable Agricultural Development and Use of Agrobiodiversity in the Asia-Pacific Region” and the APAARI biennial 11th General Assembly Meeting from 12-15 October, 2010.

The Committee reviewed and approved the APAARI work plan and budget for 2010. It also approved the audited accounts of APAARI for the period January-December, 2009. The Committee approved publication of success stories on: Short Duration Mungbean in Asia from AVRDC, Value Addition and PHM in Rice for Enhanced Income from IRRI and Banana Production in India and Philippines from ICAR and PCARRD, respectively.

Regarding investment of APAARI savings funds, the Committee requested Dr. Raghunath Ghodake, Dr. Robert Zeigler and Mr. Raju Barwale to suggest the fund management strategy for APAARI.

Dr. Raj Paroda briefed on the outcome of GCARD 2010, where APAARI had made a presentation on “Reorienting Agricultural Research for Development in Asia-Pacific: The Way Ahead”, which was well received.

Dr. Robert Zeigler presented an update on Global Rice Science Partnership (GriSP) Mega Program on increasing and sustaining rice production for the benefit of the poor producers and consumers. It was proposed to organize the regional GRiSP Consultation for Asia in partnership with APAARI stakeholders while developing the full project proposal. The members agreed to endorse GRiSP and also other Mega Programs being developed by other CG centers.

New CIARD Website Launched

The new website of the Global Initiative on Coherence in Information for Agricultural Research for Development (CIARD) was launched jointly by FAO and GFAR at the XIII World Congress of IAALD (International Association of Agricultural Information Specialists) held in Montpellier from 24-30 April, 2010. The website provides a virtual platform for institutions to evaluate their information management practices against a checklist of good practices.

For more information on CIARD, please visit: www.ciard.net
The XII Steering Committee (SC) meeting of the Asia-Pacific Consortium on Agricultural Biotechnology (APCoAB) was held on 24th April, 2010 at the National Agricultural Science Centre Complex, New Delhi. It was chaired by Dr. Abd Shukor Abd Rahman, Chairman, APAARI and attended by nine other members/representatives and special invitees. Dr. Raj Paroda, Executive Secretary, APAARI welcomed the participants and expressed his appreciation of the support received from FAO, ICRISAT, COA and ACIAR in sustaining the consortium. The Chairman lauded the achievements of APCoAB and the recognition it has earned in such a short span.

Dr. J.L. Karihaloo, Coordinator, APCoAB presented the action taken report on (i) organization of Expert Consultation on “Biopesticides and Biofertilizers for Sustainable Agriculture in Asia-Pacific” at TARI, Taichung, and other technical meetings, (ii) training course on “In Vitro and Cryopreservation Techniques for Conservation of Plant Genetic Resources” held at National Bureau of Plant Genetic Resources (NBPGR), New Delhi, (iii) publication of Proceedings of Expert Consultation on Biopesticides and Biofertilizers, and (iv) updates on web-based information dissemination. Audited accounts for 2009 and budget for 2010 were presented and approved. The following work plan for 2010 was approved:

**Expert Consultations/Symposia/Meetings:**
- Expert Consultation on “Post Harvest Technology and Value Addition of Horticultural Produce” to be held at MARDI, Malaysia in December, 2010.
- APCoAB SC meeting to be held along with International Symposium on Sustainable Agricultural Development and Use of Agrobiodiversity in the Asia-Pacific Region in Korea in October, 2010.

**Training Courses:**
- Training Program on “Edible Mushroom Production for Asian Farmers and Entrepreneurs” in collaboration with COA to be held at TARI, Taichung, 21-27 November, 2010.
- Training Program on “In vitro and cryopreservation techniques for conservation of Plant Genetic Resources”, to be held at NBPGR, New Delhi, 15-27 November, 2010.
- Training Program on “Assisted reproductive technologies for livestock genetic improvement” in collaboration with COA and ILRI to be held at Livestock Research Institute, Chinese Taipei.

**Publications:**
Publication of success stories on Banana Tissue Culture in India and Banana Tissue Culture in the Philippines.

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**Latest APCoAB Publication**

**Proceedings of Expert Consultation on Biopesticides and Biofertilizers for Sustainable Agriculture**


The publication is available at www.apcoab.org and www.apaari.org.
Agrobiodiversity is the foundation of sustainable agricultural development. Plant Genetic Resources for Food and Agriculture (PGRFA) are an essential resource to meet the future food security needs. The threats to these resources are growing, whereas the efforts to conserve and use genetic diversity are not very satisfactory. At the same time, the large scale adoption of few improved varieties has resulted in displacing diverse genetic variability. Traditional knowledge associated with the use of old varieties/landraces, has largely been ignored and is rather disappearing. Besides, the reduced agricultural biodiversity on farm can significantly increase the vulnerability of farmers and existing agro-ecosystems. In view of these concerns, concerted efforts have been made by various international/regional organizations and some national governments towards collecting, characterizing, evaluating, documenting, conserving and utilizing available crop diversity. In recognition of the critical role played by biodiversity in sustaining lives and livelihoods, the United Nations General Assembly at its sixty-first session decided to designate 2010 as the International Year of Biodiversity. The declaration hopes to bring greater awareness about the importance of biodiversity by promoting different initiatives that can reduce current rate of loss occurring globally and enhance PGRFA activities aimed mainly at conservation through use.

The Asia-Pacific region is the center of diversity of many important species of crops, animals and livestock. Resource poor farmers in the region are largely dependent on the agrobiodiversity of minor crops, wild relatives of crops and wild species of plants and animals for their food security and livelihood. The region houses about 58% of the world’s population and 74% of the agricultural population, but, has only 38% of the world’s agricultural land. Attainment of Millennium Development Goals (MDGs), particularly alleviating poverty, assuring food security and environmental sustainability against the background of declining natural resources, together with changing climate scenario, presents a major challenge to most of the countries in the Asia-Pacific region during 21st century.

APAARI, in collaboration with its stakeholders, especially CGIAR Centers, ARIs, GFAR and other regional fora, and the national agricultural research systems (NARS) continue to review the role and direction of agricultural R&D to efficiently address especially the above challenges. Bioversity International in partnership with several international and regional organizations in the Asia-Pacific has initiated several programs to promote conservation and use of agrobiodiversity for sustainable agricultural production. Four sub-regional networks have been organized to promote regional collaboration for strengthening PGRFA conservation and use. These are: (i) South Asia Network on Plant Genetic Resources (SANPGR), (ii) the East Asia PGR network (EA-PGR), (iii) Regional Cooperation for Plant Genetic Resources in Southeast Asia (RECESEA-PGR) and (iv) the Pacific Plant Genetic Resources Network (PAPGREN). In addition, there are several commodity focused PGR networks like the Banana Asia Pacific Network (BAPNET) and the International Coconut Genetics Resources Network (COGENT). These sub-regional networks are operated in close partnership with APAARI.

Rededicating to the efforts in the 2010 International Year of Biodiversity, APAARI in partnership with the Rural Development Administration (RDA), Republic of Korea, Bioversity International and other International Centers is organising an “International Symposium on Sustainable Agricultural Development and Use of Agrobiodiversity in the Asia-Pacific Region” from 13 to 15 October, 2010 in Suwon, Republic of Korea. The symposium will provide an opportunity to the major stakeholders in the Asia-Pacific region to review, identify and redefine the role and directions of agricultural R&D especially in the context of conservation through use of valuable agrobiodiversity for sustainable agricultural development. It will also help in deciding the ‘Way Forward’ for access and benefit sharing of valuable genetic resources. Details are as follows:

Objectives:
- To review the current status and trends for the conservation through use of agrobiodiversity for sustainable agricultural development at national, regional and global levels
- To bring together stakeholders to discuss issues that currently hinder the use and exchange of agrobiodiversity
- To discuss issues and concerns relating to access and benefit sharing of agrobiodiversity in the region
- To discuss policy framework and research priorities of NARS in the region aiming at effective conservation and use of agrobiodiversity for sustainable agriculture production

Program:
The meeting will be organized in sessions comprising country reports and thematic lectures on status of agro-biodiversity conservation and use; recent advances in global initiatives and advances for managing agro-biodiversity; group discussions on topics like: collaboration for PGR, strengthening PGR conservation and use in Asia-Pacific, implementation of ITPGRFA, and Role of PGR networks in strengthening partnership followed by plenary sessions. International and national experts on scientific, technical and policy aspects will be invited to make presentations and participate in the discussions. Representatives of civil society and farmers’ organization will be involved to present stakeholders’ perceptions. Representatives from APAARI member institutions, Bioversity International, Global Forum on Agricultural Research (GFAR), FAO and Treaty Secretariat, CGIAR Centers (IRRI, ICRISAT, ICARDA, CIMMYT, AVRDC, CIAT, ILRI), PGR Networks in Asia-Pacific, NGOs and Donor Organizations/Foundations would participate in the symposium.

Sponsors:
APAARI, Rural Development Administration (RDA) and Bioversity International are the sponsors for this conference with co-sponsorship from IRRI, ICRISAT, CIMMYT, ICARDA, GFAR, FAO, ILRI and other Donors/Foundations.

For more details of the symposium, please visit: www.apaari.org

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An International Workshop on Fast Growing Economies’ Role in Global Agricultural Research for Development was organized by the Chinese Academy of Agricultural Sciences (CAAS) and supported by the Global Forum on Agricultural Research (GFAR) in Beijing from 8 to 10 February, 2010. More than 30 participants, most of them senior representatives of national research systems from 9 countries, 6 regional forums on agricultural development, and 4 international organizations were present. Dr. Raghunath Ghodake, Director General, National Agricultural Research Institute (NARI), Papua New Guinea and APAARI Executive Committee member represented APAARI and made presentation on Agricultural Research for Development in the Asia-Pacific Region: Status, Needs and Mechanisms for Collaborations and Partnerships.

Fast growing economies are increasingly emerging as dominant forces in global economic, social and environmental affairs. These economies represent the world’s largest potential markets and trading partners, the source of much of both the world’s natural and human resources and of major sustainability challenges and innovation. Some of the dramatic successes in rapid development as illustrated in the examples from Brazil, Russia, India, China and South Africa (BRICS) have a lot to share related to ARD with other economically developing countries. This is critical to ensure sustainable food production and its accessibility to vulnerable populations in these countries.

The workshop discussed the status of ARD in fast growing economies, their current and potential contributions to ARD for development impact globally and their needs for collaboration and partnerships. This was followed by expression of regional needs by representatives from Africa, West Asia, Central Asia, Asia-Pacific, Europe and Latin America. Major international and regional institutions also indicated their perspectives on the subject. A discussion was held on specific issues such as ARD investment, institutional change, capacity development, sharing of information, knowledge, skills and technology and research to enable market participation. One day was spent in deliberating the way forward.

Representatives from Africa, West Asia, Central Asia, Asia and Pacific, Europe and Latin America expressed need for access to capacities from countries and organizations that are better positioned within each region. They highlighted need for dissemination of success cases to promote best practices and successful strategies leading to better and more effective collaborations within and between regions. The major international and regional institutions emphasized the need for collaboration and partnerships among the fast growing economies and also with economically developing countries for development impact globally. The participants from the fast growing economies with large NARS felt that the focus of their collaboration and partnerships should be on sharing and exchanging information, experiences, knowledge, skills and technology globally in the following areas:

- Advocacy, sensitization and awareness building on the contribution agricultural research has for agricultural development and overall economic, social, environmental and technological development in developing countries;
- Institutions and systems development for agricultural research and innovation, education and extension;
- Sharing and exchange of information on agricultural research and innovation processes including those of policy making, strategizing, infrastructure and capacity development and research management per se;
- Sharing data, information, knowledge, skills and technology related to agricultural development, research and innovation;
- Improving the governance of global agricultural research for development systems and the flow of information and technology globally.

The fast growing economies want to play a more active role in ARD globally. They want their contributions judged not by their funding of international research organizations but the value they generate in sharing experiences, information, knowledge, skills and technology. They want change in systems, institutions, structures and processes of collaboration and partnerships so that their efforts have development impact. It was agreed that there was a need for an initiative to create a group of countries that have fast growing economies and substantial investment, human capital and experiences in agricultural research such as Brazil, China and India so that they can participate together and jointly in global dialogues and decision making related to agricultural research for development. It was felt that the first step should be taken by GFAR to invite these countries to be direct members of the forum.

(Source: Dr Raghunath Ghodake, DG, NARI, Papua New Guinea, raghunath.ghodake@nari.org.pg)
Helping South Asian Farmers through Resource Conserving Technologies: An Update on Rice-Wheat Consortium (RWC)

The Rice-Wheat Consortium for the Indo-Gangetic Plains (RWC) is a CGIAR Ecoregional Program that brings together four NARES (Bangladesh, India, Nepal and Pakistan), Centers (CIMMYT, IRRI, IWMI, ICRISAT, CIP, AVRDC and ILRI), and several ARIs (e.g., Cornell University, CABI, IAC Wageningen, IARC Rothamsted, and Charles Sturt University of Melbourne), with China as an Associate Member. The RWC aims to improve the productivity and sustainability of rice-wheat systems in the Indo-Gangetic Plains- in the broad sense of fostering sustainable improvements in system productivity and diversity, while conserving soil, water and biological resources currently dedicated to rice-wheat rotations.

More than a billion people living in South Asia depend for food on moderately intensive cereal cropping systems which are central to reducing poverty. Such systems are usually irrigated and moderately productive, featuring multiple crops, including large areas of rice, wheat and maize, and livestock production. These systems suffer from the unsustainable exploitation of water and soils, inefficient use of chemical inputs, and emerging or worsening disease and pest problems. Farmers tend to be more market-oriented and driven by the need to sustain local rural communities and neighboring urban areas. Farmers will be in need of best management practices and alternate options to help conserve energy and water resources, reduce growth of GHG emissions and improve the quality of life for participating farm families. All these will require bringing in a wide range of skills, experiences, and contacts.

The rice-wheat research to increase site-specific productivity and sustainability carried out by the RWC in partnership with NARES and IARCs in four RWC countries has made remarkable progress in successfully developing and disseminating a wide-range of resource-conserving technologies for the system. Of the RCTs promoted, zero/reduced tillage proved most successful. It has been estimated that the investments made by RWC accelerated adoption of zero/reduced tillage (ZT/RT) by five years, yielded a net present value of US$ 94 million, a benefit-cost ratio of 39 and an internal rate of return of 57%. In addition, the RWC has made much progress with respect to governance, producing international public goods and in developing impact pathways:

Governance:
- Strong leadership has been exercised by a NARS-led Regional Steering Committee with membership at the Director General level.
- Technical guidance has been provided by a Regional Technical Coordination Committee with membership from stakeholder institution scientists.
- A management structure has been developed, with National and Site Coordinators and Steering Committees.
- A full-time Facilitation Unit has been established and currently coordinated by IRRI.

International Public Goods:
- Conservation agriculture technologies appropriate for small- and medium-scale farmers and which address concerns such as yield plateaus, water shortages and declining water tables, resource fatigue, turn-around time for planting of winter crops after rice, climate change, and pollution.
- Zero-tillage or reduced-tillage options that allow farmers to produce more at lower costs, conserve land and water resources, and improve environmental quality.
- Knowledge of improved practices that allow for expanding livestock and horticulture and their gains to both growers and consumers. The RWC “basket” of crop management options exhibit divisibility in application and utility for the farmers.
- Increased capacity of RWC partners to design and implement research which is amenable to subsequent scaling up.

Impact Pathways and Partnerships:
The RWC has applied a new model for farm technology development and dissemination in South Asia, encouraging farmers, researchers, and extension agents work as teams. Farmers actively participate in testing, refining, and promoting promising innovations. They are encouraged and backstopped by researchers, who often go straight to farmers’ fields with promising innovations, rather than spending years in testing and refinement on research stations. As part of this, RWC researchers and extension agents interface with multiple actors- including farm implement manufacturers, input suppliers, and others- along complex innovation pathways. The RWC facilitation unit has provided stability, continuity, effective coordination, and a non-partisan stance. This has fostered the cross-fertilization of knowledge and practices across borders, even in times of regional or local conflict. The RWC plays a pivotal role as true facilitator, information provider, technology clearinghouse, and capacity builder.

Future Role of the RWC
The contributions made by the RWC are manifested by prestigious awards, namely the CGIAR Chairman’s Excellence in Science Award and the King Baudouin Award for Partnership. It is widely recognized that the outputs of the RWC far exceed investment so far made and that it must continue and broaden its scope to embrace the emerging future challenges in South Asia. The Regional Steering Committee (RSC) of the RWC strongly recommended that the RWC must be forward looking and address emerging issues of broader importance such as shortages of water and labor, diversification of cereal systems, and adverse effects of climate change.

RWC is envisaged as a major cornerstone for a larger, multi-sectoral research and development effort on improving the productivity and sustainability of intensive cereal systems in South Asia. During its 14th meeting, RSC strongly supported the new “Cereal Systems Initiative for South Asia” and agreed that the RWC should evolve with CSISA to broaden its scope as a major force for agricultural development.

For more information, please visit: http://www.rwc.cgiar.org/ and http://csisa.irri.org/

(Source: Dr. J.K. Ladha, RWC, j.k.ladha@cgiar.org)
Indian Agricultural Universities Association: A Profile

The Indian Agricultural Universities Association is a Registered Society, established in November 1967 with nine Indian agricultural universities as its founder members viz. PAU, Chandigarh (now Ludhiana); APAU (now ANGRAU), Hyderabad; JNKVV, Jabalpur; UPAU (now GBPV) Pantnagar; UAS, Bangalore; KU, Kalyani (now BCKV, Mohanpur); OUAT Bhubaneswar; UU (now MPUAT, Udaipur) and IARI, New Delhi. The main objectives of the Association are to serve as inter-university organization; to promote, support and undertake such programs as may have improved norms and standards in agricultural education, research, training and extension in universities; to act as a bureau of information and to facilitate communication, coordination, mutual consultation and collaboration amongst universities.

To achieve the objectives, IAUA undertakes, organizes and facilitates annual convention, symposia, brainstorming sessions and its regional meetings. It also works in collaboration with other national and international sister organizations in India. Presently, almost all the agricultural universities in India numbering 51 are its members. Universities and National Institutes (Deemed Universities) in India, which provide an integrated program of teaching, research and extension education in agricultural sciences, are entitled to become its ‘Regular Member’.

The Association has extended its linkage with International sister associations, like Asia-Pacific Association of Agricultural Research Institutions (APAARI), Bangkok; International Livestock Research Institute (ILRI), CG Centers Block, NASC Complex, New Delhi; Asian Association of Agricultural Colleges and Universities (AAACU), University of the Philippines at Los Banos (UPLB), Laguna, Philippines; International Association of Universities, UNESCO House, France; and Kazakh National Agrarian University, Almaty, Kazakhstan.

All the Vice Chancellors of member universities or institutions constitute Association’s General Body. The General Body meets once a year to decide activities and also to elect Executive Committee of the Association for the ensuing year. Most working is governed and guided by the Executive Committee which meets quarterly. The decisions on policy matters are discussed and ratified by the General Body in its Annual Meeting usually held in December every year. The main source of revenue is annual subscription from member universities.

The IAUA brings out quarterly newsletter publishing significant contributions made by the member universities. IAUA website www.iauaindia.org provides information on annual conventions, national symposiums, regional meetings and brainstorming sessions along with the recommendations, brief about each member university, and bio-data of the past presidents of IAUA.

For more information on IAUA, please contact: Dr. R.P. Singh, Secretary General, IAUA, IG2, CGIAR Block, NASC Complex, D.P.S. Marg, Pusa Campus, New Delhi 110012 (INDIA); Tele Fax 91-11-25842422; Mobile 9811930811; Email: esiaua@yahoo.co.in or drsinghrp@rediffmail.com

Update on AVRDC’s New Regional Center for West and Central Asia and North Africa

Dr. Ahmed Moustafa, Director of AVRDC’s new Regional Center for West and Central Asia and North Africa (CWANA, based in Dubai, United Arab Emirates) and Dr. Greg Luther, Head of Global Technology Dissemination at AVRDC- The World Vegetable Center, visited Bahrain in March 2010 to participate in a workshop on “Creating Impact through Partnership: Technology Development and Adaptation in Vegetable Production in Bahrain and Saudi Arabia.” They met with representatives from Saudi Arabia and Bahrain to work on plans for future collaboration with seven Gulf countries (Kuwait, Saudi Arabia, United Arab Emirates, Qatar, Yemen, Oman, and Bahrain). Although many Gulf countries have wealth from oil revenues, they still are vulnerable to food security problems; increasing national vegetable production can provide a measure of security in volatile global markets. There is considerable scope for growth in vegetable production in the Gulf, though there are big differences between the countries in the region. Saudi Arabia, for instance, is 90 per cent self-sufficient in vegetable production.

The Saudi government is encouraging farmers to use drought-resistant varieties of vegetables, but none are available. Bahrain, on the other hand, is 19 per cent self-sufficient in vegetable production, and 60 per cent of vegetable farming still follows traditional practices. Tomato is the most important vegetable in both Saudi Arabia and Bahrain. Research institutions in Saudi Arabia are working to develop drought-resistant tomato, and collaboration with AVRDC, where work on heat- and drought-tolerant tomato lines has been going on for some time, could be of great benefit to farmers. Participants expressed strong interest in the Center’s sweet pepper, okra, green bean, eggplant and vegetable soybean lines. In addition, the Saudi participants showed great interest in the Center’s trap crop, biofungicide, and compost tea technologies. Future collaborations will include a training course on grafting, hydroponics, integrated pest management and IPPM (Integrated Production and Protection Management) in Qatar, and variety trials in Saudi Arabia for tomato, sweet pepper, okra, and green beans and for tomato, sweet pepper, okra, eggplant, green beans, and vegetable soybean in Bahrain.

(Source: Mr. Maureen Mecozzi, AVRDC, maureen.mecozzi@worldveg.org)

New APAARI Members

Council of RNR Research of Bhutan (CoRRB) has joined recently as Member, whereas Northern Marianas College–Cooperative Research, Extension and Education Service (CREES), Northern Mariana Islands, and University Putra Malaysia (UPM) have joined APAARI as Affiliate members.

APAARI family welcomes them.
ICARDA office, South Asia & China Regional Program in New Delhi, India organized its first Regional Coordination Meeting for South Asia & China during 12-14 December, 2009 at NASC Complex, New Delhi on “Strategic Partnership Towards Enhancing Food and Nutritional Security in South Asia and China”. Dr. Mangala Rai, Secretary, DARE & Director General, ICAR, Govt. of India inaugurated the event, whereas the Chief Guest Dr. Raj Paroda, Executive Secretary, APAARI & Chairman, TAAS presided over the function and Dr. J.S. Samra, CEO, NRAA was the Guest of Honour. More than a hundred participants from Afghanistan, Bangladesh, Bhutan, China, India, Nepal, Pakistan and ICARDA Headquarter, Syria participated in the meeting. Despite his deep desire, Dr. Mahmoud Solh, Director General of ICARDA could not attend the meeting, but sent a message for its success and his support to implement the recommendations.

Dr. Raj Paroda, who is one of the key figures in establishing this program and all time supporter of ICARDA, emphasized in his presidential address on the value of partnership between national agricultural research systems and the international research organizations as well as among national programs. He also mentioned that the large collections of germplasm conserved at ICARDA would be useful for further development of lentil, chickpea, faba bean, grass pea, barley and wheat cultivars tolerant to new stresses emerging from changing climate and to meet farmers’ need in the region. He also sought ICAR’s support to CGIAR systems, most particularly to ICARDA. Dr. Mangala Rai assured the house that ICAR would provide more support to CG and to ICARDA. He informed that such a support will be given to a recently submitted pre-breeding project on these crops which are very important for sustained food security of India. Dr. Rai affirmed Indian support to regional programs in germplasm exchange, crop improvement and the capacity development. Dr. Samra emphasized on 65% area under rainfed farming in India. Hence, ICARDA’s mandate very well fits in the research and development agenda of the country. He wished that this meeting results in concrete research programs to help farmers in rainfed areas.

Introducing the activities of the International Centre for Agricultural Research in the Dry Areas (ICARDA), based in Aleppo, Syria, Dr. Kamel Shideed (ADG-ICC) informed that ICARDA’s research in collaboration with national partners, and its research portfolio is built on four pillars: (i) Biodiversity and Integrated Gene Management (BIGM) for crop improvement research in barley, lentil, faba bean, kabuli chickpea, grass pea and wheat for CWANA region, (ii) Integrated Water and Land Management Program (IWLM), (iii) Diversification and Sustainable Intensification of Production Systems (DSIPS), and (iv) Social, Economic and Policy Research (SEPR).

The joint meeting focused on enhancement of food legume production for nutritional security, barley improvement for high yielding malt, food and feed in various agro-ecologies, combating wheat stem rust, resource use efficiency and policy options for improving livelihood of rural communities of South Asia and China and integrating crop-livestock systems, improving water use efficiency and rangeland management.

The participants discussed future collaborative research issues among the countries of South Asia. Three thematic groups were constituted and one facilitator in each group was identified to help develop strategic collaborative work plan which was presented during plenary session on 13th December, 2009 with Dr. Swapan Dutta (DDG-CS, ICAR) as Chair and Dr. Sanjaya Rajaram (ICARDA) and Dr. Shahid Ahmad (Pakistan) as Co-Chairs. Facilitators for three thematic working groups, namely; Wheat and barley improvement; Food legume improvement and Natural resource and rangeland management presented collaborative work plans.

The participants were of the view that an integrated, demand-driven, people-oriented approach should be adopted to ensure food and nutritional security with improved livelihoods, conserving natural resources in the face of climate change and globalization. The workgroup resulted in conceptualization of an eco-regional Mega Program for South Asia for changing CGIAR system.
It was an unusual, counterintuitive idea: use small gardens instead of vast farm fields to produce crops for the hungry millions of West Africa’s Sahel. The world’s largest agricultural research consortium recognized the practical value of the approach, and the Consultative Group on International Agricultural Research (CGIAR) bestowed its Science Award for Outstanding Partnership to AVRDC– The World Vegetable Center (AVRDC) and the International Crops Research Institute for the Semi Arid Tropics (ICRISAT) for their work in developing and promoting vegetables grown under irrigated and rainfed production systems to combat poverty and malnutrition in the Sahel of West and Central Africa.

The award was presented at a ceremony on March 29, 2010 held in conjunction with the Global Conference on Agricultural Research for Development (GCARD) in Montpellier, France. Dr. J.D.H. Keatinge, Director General, AVRDC and Dr. Abdou Tenkouano, Director, AVRDC’s Regional Center for Africa accepted the award for AVRDC and Dr. William Dar, Director General, ICRISAT accepted the award for ICRISAT.

This partnership was initiated in 2001 with an observation: If farmers could grow high-value vegetable and fruit crops in market gardens- small irrigated plots ranging from 100-500 square meters in size- they would be able to gain a measure of control over an erratic and unforgiving climate, increase their incomes, and help improve the health of their families and communities.

That year, Dr. Dov Pasternak of ICRISAT started introducing improved gardening methods and simple, low-cost, low-pressure drip irrigation (called the “African Market Garden” system) in the region. By 2003, AVRDC established regional variety trials in Bamako, Mali to evaluate vegetable varieties suited to production under local climatic conditions that growers would find acceptable. More than 2500 market gardens now use the African Market Garden system in Senegal, Burkina Faso, Niger, and Benin. These gardens provide returns of upto USD 1500 annually to farmers in a region where the average daily wage is about a dollar a day.

(Source: Mr. Maureen Mecozzi, AVRDC, maureen.mecozzi@worldveg.org)

APAARI Signs MoU with Asian Institute of Technology (AIT)

APAARI signed a Memorandum of Understanding (MoU) with the Asian Institute of Technology (AIT), Bangkok, Thailand to promote the application of Information and Communication Technologies (ICTs) for sustainable agricultural development in the Asia-Pacific region. Dr. Raj Paroda, Executive Secretary, APAARI and Prof. Said Irandoust, President, AIT signed and exchanged the MoU on 12th February, 2010 at AIT Campus.

The MoU is intended to facilitate further development of the Asia-Pacific Agricultural Research Information System (APARIS), an APAARI initiative aimed to promote the application of ICTs for sustainable agricultural development in the region. The MoU provides a framework for cooperation between APAARI and AIT Extension for mutually beneficial cooperation in promoting, participating and delivering leadership development programs, and conducting training and building capacity.

Under the MoU, APAARI and AIT agreed to facilitate greater adoption of ICTs in agricultural research in the Asia-Pacific region; share resources as well as responsibility for management of joint programs and projects; organize activities of mutual interest including conferences, workshops and training courses in fulfillment of their missions; publish the results of research and collaborative work by the staff from both parties; facilitate training in related areas at AIT Extension and backstop knowledge sharing activities through online mentoring.

Prof. Sudip K. Rakshit, Vice President for Research, AIT; Dr. Jonathan Shaw, Director AIT Extension; Dr. Attaluri Srinivasacharyulu, APARIS Coordinator and Mr. P.K. Saha, Liaison Officer, APAARI were present on the occasion.

Dignitaries present during the signing ceremony
The world is confronted with major challenges of food deficit and sky rocketing food prices putting especially the poor and vulnerable people under severe strain. Along with, increasing incomes and changing food habits in a number of middle income countries put increasing pressures on production systems. Depleting natural resources and climate change pose additional problems that make realisation of sustainable productivity enhancement a distant goal.

The Consultative Group on International Agricultural Research (CGIAR), established in 1971, is a partnership of donors from developing and industrialized countries, international and regional organizations and private foundations that support 15 international centers involved in research to solve diverse problems facing agriculture in developing countries. The centers work in collaboration with national governments, private businesses, farmer groups and other civil society organizations to foster sustainable agricultural growth that benefits farmers and other stakeholders. Some of the significant outcomes of CGIAR research have been: biological control of the cassava mealy bug and green mite, new rices for Africa (NERICAs) that combine the high yields of Asian strains with African strains’ resistance to local pests and diseases, more than 50 varieties of drought-tolerant maize varieties grown on 1 million hectares across Eastern and Southern Africa, a flood-tolerant version of a rice variety grown on 6 million hectares in Bangladesh, resource-conserving “zero-till” technology widely adopted in rice-wheat systems of South Asia, a simple methodology for integrating agriculture with aquaculture which bolsters income and food supplies in areas of Southern Africa, and a new approach that predicts the likely impact of climate change on major crops’ wild relatives.

While these contributions have been widely acknowledged, it is also recognized that over the years countries like Brazil, China and India have moved quite ahead in advancing their national agricultural systems to meet the emerging local demands. In view of the current vastly changed scenario, the CGIAR has recognized the need to change and adapt so as to remain relevant as a major player in the world of international agricultural research. Consequently, the CGIAR has embarked upon a major change process to effectively deliver upon its mission “to reduce poverty and hunger, improve human health and nutrition, and enhance ecosystem resilience through high quality international agricultural research, partnership and leadership.”

Following two years of consultations, the CGIAR in December 2009 adopted a new business model comprising two core pillars, the CGIAR Fund and the Consortium of CGIAR centers. The CGIAR Fund will bring together the donors with the aim of harmonizing their contribution to ARD, improving the quality and quantity of funding available, and implementing greater financial stability. The CGIAR Consortium will unite the IARCs supported by CGIAR and provide a single window for the donors.

A structure for the coordinated work of the IARCs provided by The Strategy and Results Framework (SRF) aims at steering the IARCs towards their goals with focus and efficiency. The Consortium Board is responsible for formulating the SRF which it does in partnership with donors, research organizations, farmers and other stakeholders, including CSOs. The first direct consultation with the stakeholders, the Global Conference on Agricultural Research for Development (GCARD) organized by Global Forum on Agricultural Research (GFAR) was held during 28-31 March, 2010 at Montpellier, France (for details please see page 2 of this newsletter). The SRF applies all across the CGIAR and ensures that the research outputs contribute to system-level results as elaborated in the draft strategy paper:

1. **Lift productivity and reduce poverty**: An annual increase in agricultural productivity by an additional 0.5 per cent to help farmers meet the food needs of the future world population and to help reduce poverty by 15 per cent by 2025, as part of an overall global agricultural R&D strategy.

2. **Contribute to reduction of hunger and improved nutrition**: A reduction of hunger and improved nutrition in line with Millennium Development Goal 1 (MDG 1) targets, cutting in half by 2015 (or soon thereafter) the number of rural poor who are undernourished, with a focus on contributing to a reduction in child under-nutrition of at least 10 per cent.

3. **Contribute to sustainability and resource efficiency**: A reduction in the impacts of water scarcity and climate change on agriculture through improved land, agroforestry, forestry, biodiversity and water management methods that increase yields with 10 per cent less water, reduce erosion, and improve water quality by maintaining ecosystem services.

The SRF has specified seven Thematic Areas of research based around which major research programs, termed Mega Programs (MP), are being developed. In addition to MPs, three cross-cutting initiatives are proposed: gender in agriculture; capacity strengthening, learning and knowledge sharing; and strategic planning and intelligence. One of the core functions of the CGIAR will be strengthening the R&D capacity of all partners, particularly the weaker NARS. The Mega Program proposals that are being ‘fast tracked’ to be made operational quickly relate to Maize, Rice, Wheat and Climate Change. The Consortium

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**The Seven Thematic Areas**

1. Integrated agricultural system for the poor and the vulnerable
2. Policies, institutions and markets to strengthen assets and agricultural incomes for the poor
3. Sustainable production systems for exercising food security
4. Agriculture for improved nutrition and health
5. Durable solutions for water scarcity and land and ecosystem degradation
6. Forests and trees
7. Climate change, agriculture and food security

*Continued on Page 14*********
CBD Meeting on Biosafety Capacity Building

The Sixth Coordination Meeting for "Governments and Organizations Implementing and/or Funding Biosafety Capacity Building Activities" of the Convention on Biological Diversity was held at Siem Reap, Cambodia on 1-3 February, 2010. The meeting was attended by 35 participants from 17 governments and 10 organizations. APAARI was invited to participate as an organization carrying out biosafety capacity building in the Asia-Pacific region.

The objective of the meetings was to: (i) share information and experiences on ongoing initiatives; (ii) identify key biosafety capacity building issues, priority needs and gaps and ways to address them; (iii) identify overlaps and potential opportunities for collaboration; and (iv) exchange views to improve the planning and delivery of capacity building activities.

Dr. J.L. Karihaloo, Coordinator, APCoAB represented the APAARI. He apprised the participants about the on-going and planned biosafety capacity building activities of APAARI and also invited participation and support of other organizations. Group discussions were held on capacity building in public awareness, education and participation concerning the safe transfer, handling and use of living modified organisms.

APAARI-IFPRI/ASTI Workshop on ARD Investment Trends

An Implementation Workshop on Measuring and Analyzing Agricultural R&D Investment and Capacity Trends in South Asia was jointly organized by APAARI and International Food Policy Research Institute/Agricultural Science and Technology Indicators (IFPRI/ASTI) on 29-30 April, 2010 in Bangkok, Thailand.

The workshop was intended to initiate the ASTI Project on Measuring and Analyzing Agricultural R&D Investment and Capacity Trends in South Asia supported by the Bill & Melinda Gates Foundation. This project aims to begin a new survey round to update and improve the investment and capacity data for Bangladesh, India, Nepal, Pakistan and Sri Lanka that were collected during 2003-05.

Board in its second meeting in May 2010 also approved eleven Megaprogram concept notes on: integrated system for dry areas and humid tropics; aquatic agriculture; policies and markets; roots, tubers and banana; grain legumes; dry land cereals; livestock and fish; nutrition and health; water scarcity solutions; and forests and trees. Inter-institutional partnerships and collaborations with development partners will be a strong focus of all MPs. The Consortium Board will oversee the implementation of MPs and delivery of outcomes.

Progress is also being made towards operationalizing the CGIAR Fund, with donors holding consultations to finalize documents establishing the legal framework.

With these far reaching changes on the anvil, it is hoped that the reformed CGIAR will be in a better position to deliver the much needed agricultural technologies and products to the poor and needy farmers of the developing world.
On January 19, 2010, the Asia-Pacific Association of Agricultural Research Institutions (APAARI), the Trust for Advancement of Agricultural Sciences (TAAS), and the International Food Policy Research Institute (IFPRI) hosted the New Delhi launch of the book *Millions Fed: Proven Successes in Agricultural Development*. The Bill & Melinda Gates Foundation called upon IFPRI to assess the evidence on what works in agriculture—what sorts of policies, programs, and investments in agricultural development have actually reduced hunger and poverty. The resulting book, *Millions Fed*, for the first time pulls together in one volume, 20 proven agricultural successes from all over the world, 12 of which are from the Asia-Pacific region.

During the event, Chief Guest Prof. Vijay Vyas, Member of the Economic Advisory Council to the Prime Minister, spoke about the challenges of raising agricultural growth in India and the ways in which agriculture can be put to work to solve hunger and malnutrition. Dr. Raj Paroda, Executive Secretary of APAARI and Chairman of TAAS, and member of the advisory committee that guided the project, echoed the need for sound agricultural development investments. The book’s editors, David J. Spielman and Rajul Pandya-Lorch, detailed several of the case studies through an accompanying video and discussed lessons learned, while IFPRI’s Director in Asia Dr. Ashok Gulati framed the project in the context of IFPRI’s continuing work on agriculture and food security.

*Millions Fed* highlights various successes from the Asia-Pacific region, from the development of modern pearl millet and sorghum seed varieties in India, hybrid rice in China, mungbean improvement in Asia, small holder dairy in India, zero-tillage rice-wheat cultivation in the Indo-Gangetic plains, the rapid proliferation of simple tubewells in Bangladesh, to the rise of farmed tilapia in the Philippines, land-tenure reform in China and Vietnam etc. These striking examples demonstrate that the region has a wealth of experience upon which it and other areas of the world can draw as they strive to ensure the food security of future generations. The research presented in *Millions Fed* makes clear that success will entail not only increasing the yields and production of staple food crops but also developing better policies, conserving natural resources, and improving nutrition. These successes also highlight the key elements responsible for large scale impacts and hence may facilitate the process of change in other developing countries needing similar advances in agriculture.

The *Millions Fed* products, including book chapters and video, including its Hindi version are available on IFPRI (www.ifpri/publication/millions-fed) & APAARI websites (www.apaari.org).
The Papua New Guinea (PNG) National Agricultural Research Institute (NARI) has released the ensiling technology for pig farmers in sweet potato based farming systems of the country. The use of the technology, ‘sweet potato silage for pig feed’, will help farmers in developing and preserving improved pig feed from sweet potato which can be stored over longer periods before feeding to pigs.

Pig is important in PNG for pork, income and as source of wealth for meeting social obligations. The PNG pig industry is 1.8 million village pigs, mainly indigenous breeds, that produce some 27,000 tonnes of pig meat annually. These pigs are owned by 60 per cent of all households with 77% of the population from the highlands provinces claiming pig ownership.

Sweet potato is among PNG’s most important staple crops. It accounts for 66% of total staple crop production in the country and is consumed by over 60% of the country’s six million people.

Sweet potato is also the major feed source for pigs in PNG. Feeding sweet potato tubers and vine to pigs is a popular practice by pig farmers in PNG. Growing or providing feed for pigs from family gardens is a laborious daily chore. Sweet potato tubers are also cooked before being fed to pigs. Preparing silage means that cooking pig feed will not be an added task, usually for women.

The technology resulted from NARI’s research and development efforts to improve efficient use of feed by semi-commercial pig growers. The sweet potato silage can be stored for up to seven months using simple equipment and relatively low cost materials. The technology also improves digestibility of feed, maintains good growth of pigs and potentially improves carcass quality and economic returns.

The sweet potato silage is made through ensiling techniques. Ensiling is a method of processing green and raw feed materials that enable their preservation and storage over many months. Material that undergoes ensiling, silage, can provide a nutritious and highly palatable meal for animals such as cattle, sheep, goats and pigs. The ensiling techniques will help save time and labour by enabling pigs to be fed from the preserved and stored feed.

The technology has been proven for pig feed in PNG using sweet potato tubers and vines. Trials were conducted both on-station and on-farm and the technology was then promoted to villagers and smallholder farmers from communities in which pig is culturally and economically prominent.

Silage contains feed nutrients, carbohydrates and proteins, from ingredient materials, which have been partially broken down by fermentation processes and are readily digested and absorbed by animals. Proper ensiling and careful storage enables feed to be kept in good quality for feeding long after the growing season of the crop.

Other food crops such as cassava, cassava leaf, banana and legumes as well as agro-industrial by-products such as copra meal, corn and wheat mill run and rice bran can also be used for ensiling.

All materials needed for ensiling such as graters, bins and plastic sheets can be easily obtained from agricultural stores in PNG.

(Source: Mr. Seniorl Anzu, NARI, seniorl.anzu@nari.org.pg)
Innovative Steps by Pakistan Agricultural Research Council (PARC)

Agriculture is the mainstay of rural economy of Pakistan. Nearly two-third of the country’s people live in rural areas and an overwhelming majority of them are dependent on agriculture for their livelihood. Agriculture contributes 23 per cent to national income (GDP), and employs about 50 per cent of the labor force. The development of science-based agriculture production technologies is of utmost importance for moving forward and keeping pace with developing economies. Pakistan Agricultural Research Council (PARC) research activities include: crops, horticulture and floriculture, agricultural biotechnology, farm mechanization, natural resources, animal sciences, social sciences and agricultural informatics. Under the leadership of Dr. Zafar Altaf, Chairman, PARC has been undertaking innovative activities for agricultural development in Pakistan. The following account indicates some of the innovations made in different fields.

- Development of virus-free potato seed and banana plantlets. Consequently, seed potato import has reduced to almost nil and virus-free banana is now successful in Hyderabad, Thatta and Gharo areas. Hybrid seed production of maize, oilseeds, wheat, rice, cotton and vegetables is being researched in a big way.
- In collaboration with Japan, a state-of-the-art plant genetic resources facility has been established for conservation and exchange of germplasm including collection of seeds of all plants etc. *In vitro* conservation of vegetatively propagated crops is also undertaken at this institute.
- A state-of-the-art grain quality laboratory, which is ISO 17025, has been established.
- Bio-control laboratories in five sugar mills have been established and technical assistance provided to another eight sugar mills.
- Focus is laid on various innovative technologies like biotechnology, bioprospecting, dairy goats crossbreeding, mushroom development, efficient water harvesting, remote sensing, GIS, mitigation strategies for climate change, biofuel production, biodiversity conservation, dry rice farming, organic certification, etc.
- Two waste-water treatment plants have been established for agricultural use through bio-remediation at NARC. Feasibility study of used-water treatment facility of Jamshid Colony, Beneizirabad (Nawab Shah) with a capacity of 3.0-3.5 million gallon/day has been conducted.
- Campaign launched to plant fruit saplings and vegetables to cover the spaces available along road sides, green belts etc. in the urban areas including households (backyards, frontyards and other empty spaces). An urban agriculture centre is being established at NARC through public-private partnership. Research work on high density fruit orchards is also in progress at NARC and at various locations of the country.
- Working to enhance indigenous tea production in the country since 1980s. As a result of sustained efforts, PARC has established a big nursery with 1.5 million tea plants. Tea plantation has been established on more than 400 acres at farmers’ fields.
- Introduced European honeybees in Pakistan in the 1980s, which made Pakistan a leading exporter of honey in the region. Now, more than 300,000 bee colonies exist in Pakistan which has increased honey production from 4 kg in 1982 to 28 kg per colony per annum in 2009. Around 8000 farmers are currently engaged in modern bee keeping.
- Farm Machinery Institute (FMI) of PARC has designed, developed and modified variety of farm mechanization technologies and transferred these to about 30 private sector engineering firms/companies for commercial production. The machines developed include: reaper-windrowers, groundnut-diggers, paddy-threshers and sunflower-threshers. Tractor mounted reaper-windrower, wheat drill, wheat straw chopper-cum-blower and mobile seed processing units.
- Established a network of Technology Transfer Institutes (TTIs) at Faisalabad, Tandojam, Peshawar, Quetta, Gilgit and Muzaffarabad for efficient transfer of developed. About 15000 people benefitted (farmers, junior scientists, technicians) through 750 organized training courses, published booklets/brochures (300), audio (160) and video (300) programs, exhibitions (60) and seminars/workshops (70).
- PARC website www.parc.gov.pk was launched in August 2000. It contains more than 500 pages with more than 160,000 hits by visitors from over 50 countries.
- A WTO-Food and Agriculture Related Matters (WTO-FARM) Cell was established in 2000. The Cell has conducted more than 50 workshops and seminars in close collaboration with key stakeholders across the country to create awareness of WTO regime for food and agriculture. It has also published 10 policy papers, a training manual and a bulletin for farmers.
- The PARC Agrotech Trading Company (PATCO) has been registered to patent and commercialize the technologies, services and products developed by the agricultural scientists.

(Source: Dr. Iftikhar Ahmad, DG, NARC, iftahmad@gmail.com)

Saanen- Queen of the dairy goats
Dr. Raghunath Ghodake to Represent Pacific Countries on CGIAR Fund Council

Dr. Raghunath Ghodake, Director-General, National Agricultural Research Institute (NARI), Papua New Guinea and APAARI Executive Committee Member has been appointed as a member of the CGIAR (Consultative Group on International Agricultural Research) Fund Council. Dr. Ghodake represents the Pacific Region Developing Countries and Regional Organizations on the CGIAR Fund Council.

The Fund Council is a 22 member apex representative body of Fund Donors and other stakeholders, composed of donor countries, multilateral and global organizations and foundations, and representatives of the South. The Fund Council, the Fund’s decision-making body, would review the CGIAR’s strategic impact, quality and relevance of programmatic performance, managerial and governance performance, and its financial performance and resource mobilization, based primarily on information from the Consortium. It provides oversight on the use of funds from the Fund, based in part on reporting, audits and other assurances of due diligence regarding use of such funds provided by the Consortium.

Dr. Raj Paroda Nominated to Serve on the World Meteorological Organisation’s High Level Taskforce

Dr. Raj Paroda, Executive Secretary, APAARI has been nominated as Member of the High Level Taskforce (HLT) by the World Meteorological Organisation (WMO), Geneva. As member of the taskforce, Dr. Paroda would contribute towards development of Global Framework for Climate Services (GFCS) in order to strengthen the production, availability, delivery and application of science-based climate prediction and services.

The taskforce would develop the components of the GFCS and define the roles, responsibilities, and capabilities of the elements within the GFCS and clearly illustrate how it will assist the integration of climate information and services into national planning, policy and programs for, among others, water resource management and development, health and public safety, energy generation and distribution, agriculture and food security, land and forestry management, desertification, ecosystem protection, sustainable development, and poverty reduction, taking into account the special needs of Africa, Small Island Developing States (SIDS), Least Developed Countries (LDCs), and Landlocked Developing Countries (LLDCs); develop options for governance and implementation of the GFCS; and propose required steps for implementation of proposed strategy. The details of current status of HLT activities relating to its proposed report on GFCS are available at website: http://www.wmo.int/hlt-gfcs/

Dr. Paroda Felicitated by GFAR

Dr. Raj Paroda, Executive Secretary, APAARI was felicitated for his outstanding contributions as the first elected Chairman of GFAR during 1998-2001 when its charter, strategy, logo and the Secretariat at FAO, Rome were established. Prof. Adel El-Beltagy, the outgoing GFAR Chair, presented the plaque of honour to Dr. Paroda during the Plenary Session of the GCARD organized by GFAR on March 31, 2010 in Montpellier, France.

Latest APAARI Publications

3. Bangkok Declaration on Reorienting Agricultural Research for Development in Asia-Pacific Region
4. CD on GCARD Reports
5. New APAARI Flyer

Dr. Raj Paroda receiving the plaque of honour

Representation of APAARI Members in Global Organizations

Latest APAARI Publications

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Dr. Raj Paroda, Executive Secretary, APAARI was felicitated for his outstanding contributions as the first elected Chairman of GFAR during 1998-2001 when its charter, strategy, logo and the Secretariat at FAO, Rome were established. Prof. Adel El-Beltagy, the outgoing GFAR Chair, presented the plaque of honour to Dr. Paroda during the Plenary Session of the GCARD organized by GFAR on March 31, 2010 in Montpellier, France.

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Mr. Carlos Pérez del Castillo was appointed as Chairman of the CGIAR Consortium Board in December 2009. The Consortium Board has been established to provide leadership, strategic direction, fund-raising support and to be the ultimate authority for a newly-formed Consortium of CGIAR Centers.

Mr. Carlos Pérez del Castillo, as the inaugural Consortium Board Chair, has a long and successful history of international and national public service that has spanned over 35 years. He was a member of the core team assigned with the Independent External Evaluation of FAO until 2007. From March 2004 until October 2005, he was the Special Advisor on International Trade Negotiations to the President of the Republic of Uruguay. Mr. Carlos Pérez del Castillo served as the Chairman of the WTO General Council, as Vice-Minister and Acting Minister of Foreign Affairs of Uruguay (1995-1998) and Permanent Secretary of the Latin American Economic System (1987-1991). Mr. Carlos is a member of the Board of the International Food and Agricultural Trade Policy Council (IPC).

Throughout his career, Mr. Carlos Pérez del Castillo, has been the author of a number of publications on a wide range of international economic issues. In 1990 he was awarded “The Dr. Raul Prebisch Award in Economics” by the Association of Latin American and Caribbean Economists, and he is a Permanent Member of the prestigious Harvard University Trade Group. Mr. Carlos Pérez del Castillo has received the highest decorations from the Governments of Brazil, Chile, France and Venezuela.

Mr. Hiroyuki Konuma has been appointed as Assistant Director-General and FAO Regional Representative for Asia and the Pacific (RAP) effective 1 March, 2010.

He joined FAO in 1980 as Livestock Specialist in a project in Yemen. In 1985, he was appointed as Program Officer in the FAO Regional Office for Africa in Ghana. From 1989 to 1996, he worked at FAO headquarters in Rome as Country Project Officer, and in 1996 became FAO Representative in Bangladesh where he served until 1999 when he was transferred to the FAO Regional Office for Asia and the Pacific in Thailand as the Chief, Field Operations Branch. From August 2001 till December 2002, Mr. Konuma was the Chief of the FAO Policy Assistance Branch in Bangkok. From January 2003 till February 2010, he served as FAO Deputy Regional Representative for Asia and the Pacific.

Through his leadership, Mr. Konuma has assisted countries to develop and implement policies and programs to realize food security and alleviate poverty in rural communities. His work has resulted in increased project delivery for FAO technical assistance programs in the region. He also undertook extensive missions to countries in the region to ensure that FAO’s work is making a difference in farmers’ lives.

Dr. Monty Jones, Executive Director of the Forum on Agricultural Research for Africa (FARA) has been selected as Chair of the Global Forum on Agricultural Research (GFAR). The outgoing Chair, Prof. Adel El-Beltagy of Egypt handed over the charge to Dr. Jones at the closing session of the Global Conference on Agricultural Research for Development (GCARD 2010), in Montpellier, France, March 28-31, 2010. Dr. Jones was co-winner of the prestigious World Food Prize in 2004, for his work on the development of the New Rice for Africa (NERICA) with important physical traits for weed suppression through vigorous and spreading growth and higher levels of resistance/tolerance to major biotic and abiotic stresses. The new rice varieties give higher yield, taste good and offer great promise for improving rice productivity for poor farmers in Africa. He is recipient of an honorary Doctorate of Science from the University of Birmingham. He has also received awards such as the Insignia of the Grand Officer Award from the order of the Rokel, Sierra Leone; the National Order of Merit Award from Côte d’Ivoire; and the King Baudouin Award given to WARDA by the CGIAR.

Dr. S. Ayyappan has been appointed to the post of Director General of the Indian Council of Agricultural Research (ICAR) and the Secretary of the Department of Agriculture Research and Education (DARE) with effect from 1 January, 2010. Dr. Ayyappan in his distinguished career of over 30 years has headed two ICAR institutions namely CIFA and CIFE, before becoming the Deputy Director General (Fisheries), ICAR in 2002. He is a well known scientist and has contributed immensely to the development of fisheries and aquaculture in India. He is recipient of several awards: Zahoor Qasim Gold Medal (1996-97), Special ICAR Award (1997), ZSI Gold Medal (1998), ICAR Award for Team Research (1997-98), V.G. Jhingran Gold Medal (2002), H.P. Shetty Award (2002), S.R. Bhargava Medal (2003), S.L.Hora Gold Medal (2003), ASET Gold Medal (2009).

Dr. Ayyappan is also the Vice Chair of APAARI being the Head of Indian NARS.

Dr. Robert Holmer joined as Regional Director of AVRDC- The World Vegetable Center’s Asian Regional Center in Bangkok, Thailand in January 2010. As ARC Regional Director, Dr. Holmer collaborates with donors and partners, develops new projects, and extends the research, development, and capacity-building work of AVRDC through networks to benefit farmers and consumers all along the region’s vegetable value chain. Dr. Holmer brings a wealth of experience in international development and agricultural research to the post. His recent activities have emphasized capacity building for smallholder farmers, agricultural enterprise development, and applied research in vegetable processing for domestic and international markets. Dr. Holmer received his PhD in Agricultural Sciences from Technische Universität München in 1998. From 1997 to 2009, he led the Peri-Urban Vegetable Project for Xavier University in Cagayan de Oro, Philippines.

APAARI FAMILY WISHES THEM ALL GREAT SUCCESS IN THEIR NEW ASSIGNMENTS
Forthcoming Events/Meetings

The XI General Assembly Meeting of APAARI on 12th October, 2010 in Suwon being hosted by the Rural Development Administration (RDA), Republic of Korea.


AGRO2010 Montpellier and the XI European Society of Agronomy Congress, 29 August - 3 September, 2010, Montpellier, France. For more details visit: http://www.agropolis.fr/agro2010/

CORRA (Council for Partnerships on Rice Research in Asia) Meeting, 11-12 October, 2010, Suwon, Republic of Korea. For more details visit: http://www.irri.org/corra/

International Symposium on Sustainable Agricultural Development and Use of Agrobiodiversity is to be held from 13-15 October, 2010 at Suwon, Republic of Korea jointly organized by APAARI, Rural Development Administration, Korea and Bioversity International.

The Symposium will provide an opportunity to the major stakeholders in the Asia-Pacific region to review, identify and redefine the role and directions of agricultural R&D especially in the context of conservation through use of valuable agrobiodiversity for sustainable agricultural development. It will also help in deciding the ‘Way Forward’ for access and benefit sharing of valuable genetic resources for the posterity and the benefit of humankind. It is expected that the output of this symposium will bring about: (i) better understanding on the status of conservation and utilization of genetic resources for sustainable agricultural development in the region, (ii) strengthen partnership to ensure access and benefit sharing of agrobiodiversity for improved livelihood, (iii) redefine policy and research agenda for conservation through use of agrobiodiversity, and (iv) endorsement of “Suwon Declaration on Sustainable Agricultural Development and Use of Agrobiodiversity in the Asia-Pacific Region”. For more details visit www.apaari.org

Tenth Meeting of the Conference of the Parties (COP 10), 18-29 October, Nagoya, Aichi Prefecture, Japan. For more details visit: http://www.cbd.int/cop10/

APAARI Training programs on (i) “Assisted Reproductive Technologies for Livestock Genetic Improvement” on 24-29 October, 2010 in collaboration with Council of Agriculture, Taipei and International Livestock Research Institute at Livestock Research Institute, Chinese Taipei.

(ii) “In vitro and Cryopreservation Techniques for Conservation of Plant Genetic Resources” on 15-27 November, 2010 in collaboration with Indian Council of Agricultural Research (ICAR) and Bioversity International at the National Bureau of Plant Genetic Resources, New Delhi.

(iii) “Edible Mushroom Production for Asian Farmers and Entrepreneurs” on 21-27 November, 2010 in collaboration with Council of Agriculture, Taipei at Taiwan Agricultural Research Institute, Taichung.

APAARI Expert Consultation on Post Harvest Technology and Value Addition of Horticultural Produce in Kuala Lumpur in December, 2010 in collaboration with Malaysian Agricultural Research and Development Institute (MARDI), Malaysia.

Tenth International Conference on Development of Drylands by International Dryland Development Commission (IDDC), 12-15 December 2010, Muscat, Oman.

The Conference will provide an opportunity to see how assessment could be moved from global to smaller spatial levels and the probable impact of these changes on the natural resources and agricultural productivity of different ecosystems in the dry areas and exchange information and possible ways to enhance the resilience of these systems through adaptation and mitigation strategies using traditional knowledge as well as modern science and technology. It will also identify challenges faced by the communities that live there, and the ways for reducing the pace of climate change through improved management of natural resources of water, land and biodiversity in the dry areas. Persons planning to present papers at the Conference should submit a one page, single spaced abstract of 200-300 words by 30 June, 2010. Completed manuscript must be submitted by 31 August, 2010. For details contact: Dr. Mohan C. Saxena, Executive Secretary, IDDC, E-mail: m.saxena@cgiar.org; mohan.saxena@yahoo.com

Condolence

APAARI members express their deep condolences on the loss of Dr. Rajeshwar Kumar Arora. His outstanding scientific contributions with tireless efforts in the field of conservation of plant genetic resources had led to the establishment of National Genebanks and strong regional collaboration in South-Asian countries. He spear-headed major scientific efforts in Systematic Botany, Ecology and Ethnobotany towards study of crop wild relatives, crop domestication and the Indian centre of diversity. His achievements are a testimony to the far reaching national/regional goods and long vision for the PGR conservation and management.

Dr. Arora was closely associated with APAARI as a consultant and was one of the members of Editorial Committee of APAARI Newsletter for over a decade.

All queries relating to APAARI Newsletter be addressed to:

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