



APAARI

Newsletter



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Editorial

It is a well recognized fact that the private sector has emerged to be a key player in agricultural biotechnology. On the contrary, the public sector and the International Agricultural Research Centers (IARCs) have invariably made enormous contributions through conventional plant breeding. Whereas efforts of public sector have led to international public goods, those of biotechnology have not reached the end-users in most of the developing countries. This could be possible if biotech research in the public sector, especially transgenics, could be commercialized and made available for wider use. To achieve this goal, it is critical to have strong partnership between public and private sector institutions through much needed corporate culture with enabling environment to harness research results in the field of agricultural biotechnology.

Considering above aspect to be crucial, the Asia-Pacific Consortium on Agricultural Biotechnology (APCoAB), established recently under the umbrella of APAARI, organized a "Brainstorming Session on Public-Private Partnership in Agricultural Biotechnology" on 14 March 2005 at the National Agricultural Science Centre, Pusa Campus, New Delhi. The meeting was well attended by over 40 participants representing senior scientists, managers, policy makers from the Ministries, public and private sector institutions, NGO's, CG centers and other organizations.

The meeting deliberated on: (i) the importance of public-private partnerships, and (ii) possible models of partnerships; wherein several issues and recommendations emerged relating to IPR, Biosafety, Material Transfer Agreement (MTA) and an overall need for a well structured National Policy and more effective and transparent regulatory mechanisms. It was strongly felt that a macro level policy change is required to make Public-Private Partnership more effective with increased understanding, goodwill and mutual trust among partners.

The group felt the need to define specific models of partnerships that could be considered by the policy makers for negotiations and decision-making. It was stressed that the need assessment will be crucial to further improve/strengthen collaboration for which both the sectors have to work harmoniously and with mutual appreciation to achieve desired goals.

Overall concern was expressed as to how best the application of R&D results in agricultural biotechnology can be made available to the end users. APCoAB/APAARI jointly with FAO, GFAR and other partners are working on possible follow-up of these recommendations and hold a high level policy dialogue on role of biotechnology towards poverty alleviation, nutrition and food security and income generation for the resource poor farmers, while taking care of issues such as IPR, biosafety and benefits to both producers and consumers.

APAARI shall endeavor to promote public-private partnership in our quest to ensure that the benefits of research in agricultural biotechnology reach both the producers and consumers in the developing countries of Asia-Pacific region.

Editors

APAARI Expert Consultation on Post-harvest Technologies

APAARI, in collaboration with Global Forum on Agricultural Research (GFAR) and FAO, organized an expert consultation on Post-harvest Technologies for Ensuring Food Security and Value Addition for Enhanced Income from 1-2 December 2004 in Bangkok, Thailand to co-incide with the APAARI biennial assembly attended by senior institutional representatives.

The expert consultation main objectives were to assess the role of PHT in connecting resource-constrained farmers with the markets in newly emerging trade environment.

In order to capitalize on the assembly of senior personnel from APAARI members, as well as regional expertise in post-harvest issues, the consultation also sought to advance implementation of, and agency support for, the Strategic Framework for a Global Post-harvest Initiative-Linking Farmers to Markets (GPhI) developed under the auspices of FAO, the Global Forum on Agricultural Research (GFAR) and PhAction.

An entire session of the PHT Consultation was dedicated to the GPhI. After analyzing the results of the first Asia Pacific Regional Consultation on Post-harvest held in 2001, the outcomes of the International Workshop held in Rome in 2003 which gave birth to the Strategic Framework, and integrating them all with the recent developments and also taking advantage on the "fresh" information which was passed by the previous sessions, four main priority areas were identified: a) Policy, this theme was particularly deemed as a priority by the APAARI region and came out prominently during all the presentations and discussions; b) Food safety and quality, whose importance had been expressed strongly during the meeting; c) Rural enterprise development and supply chain integration, with

particular attention on mechanisms for profitably and equitably linking resource poor farmers to emerging market opportunities; d) Capacity building of different actors and service providers, linked to the stages of development of the post-harvest sector and emphasizing technical, policy development and human resource management dimensions.

Working Groups were formed around these four themes, trying to achieve a balance in country representation and relating to the specific interest of the respective institution that each participant was representing.



The GPhI session encouraged commitment of stakeholder institutions and organizations to examine their country, institutional needs, roles and resources that could be marshalled in support

of the initiative. It also clarified key elements and gaps that could be addressed through regional and/or sub regional programmes.

In wrapping-up the Consultation, Dr. Raj Paroda acknowledged the very great interest that has been generated by the Consultation, which both confirms the felt need for concerted actions in the post-harvest area and the imperativeness of complementing the outcomes of the meeting with follow-up actions. He assured the participants that, following further analysis of the results of the Consultation, and in particular the working groups, a plan of action will be developed for their consideration. This could take the form of a consortium, similar to the one established by APAARI for the biotechnology area, or through the selection of specific topics for development into regional or global partnership programs. Below are the general recommendations developed during the meeting.

GENERAL RECOMMENDATIONS

- ◆ The perceived need for greater understanding of, and attention to achieving links between small holder farmers and markets, and the options for intervention, directly through farmers and farmer's organizations, or through traders, or other supply chain actors has to be explored and put in place.
- ◆ The need for an appropriate regulatory framework for meeting emerging market demands was recognized since such a framework has yet to evolve in many developing countries of Asia-Pacific region.
- ◆ Tremendous capacity exists for PHT research and development in the region. This capacity must, however, be mobilized effectively for the regional public goods. However, the agricultural research and development (ARD) knowledge, expertise and infrastructure differs in different NARS of the Asia-Pacific region, and even within larger NARS. Thus, flexibility in R&D activities to formulate project/PHT programmes at national/regional level is required within the prioritized areas.
- ◆ Concern was expressed as to how best to support the research needs of the less developed farming sector, since the technical developments, by and large, are favoring mostly the resourceful farmers and especially the big enterprises.
- ◆ Increased collaboration in the region with the Global Post-Harvest Initiative (GPhI), FAO and GFAR initiated activities was fully endorsed by the participants.
- ◆ The important role of APAARI in catalyzing national and other regional organizations in raising awareness and developing appropriate regional interventions to improve the effectiveness of agricultural research concerning PH sector was duly recognized.

APAARI Executive Committee Meeting Held

APAARI Executive Committee Meeting was held on 16 May 2005 in Bangkok, Thailand. Dr. H.P.M. Gunasena, Chairman, APAARI welcomed the members of the new Executive Committee. He felt privileged to serve in this capacity and thanked Dr. Iwamoto, the past Chairman, for his able leadership and support to APAARI. In his address, Dr. Gunasena emphasized that the research systems in NARS are at various stage of development and APAARI could, therefore, help in providing needed guidance for research management to NARS at individual country level, so that research systems in developing countries could play significant role in future. He emphasized the need for revisiting the research priorities and finding ways help resource poor farmers since maximum concentration of poverty is presently in South Asia. Also help in newly emerging fields such as Biotechnology, ICT etc. would be of great help.

Dr. Gunasena also urged to look for additional resources to activate different programs for yet better visibility and impact. The Chairman then requested the members to adopt the Agenda of the Meeting, which was unanimously approved.

In his address, Dr. Thierry Mennesson, Vice-Chairman, APAARI opined that countries in Asia-Pacific region would do much better if the marketable status of the end result of research output is known. During the current biennium, APAARI could try to help less developing NARS in their capacity building. He also desired to have the extension of some partnership programmes in Pacific Island countries as well.

Dr. M. Iwamoto, ex-Chairman, first introduced his successor Dr. Shinobu Inanaga, President of JIRCAS as he would in future serve as Member of this Committee. Recognizing the good R&D experience of Dr. Inanaga, he felt that his association with APAARI will be mutually rewarding. Dr. Iwamoto also wished to have continued collaboration with APAARI and acknowledged that his association in the past was highly beneficial. He also narrated his experience of recent Stakeholders meeting organized by GFAR for the Generation Challenge Program and felt beside American and European institutions, APAARI could act as third important pillar for R&D and play an important role at the global level.

Dr. Raj Paroda, Executive Secretary, APAARI, welcomed the Chair, Vice-Chair and the Members of the new Executive Committee and also thanked Dr. Iwamoto, ex-Chairman for his excellent support. He briefed the Members about important activities undertaken since the 8th General Assembly held in December 2004. The publications brought out were: (i) Proceedings of Expert Consultation on PHT and 8th GAM of APAARI, (ii) Success Story on Rainbow Trout Culture in Nepal, and the (iii) December 2004 Issue of APAARI Newsletter. He was pleased with the outcome of a "National Workshop on the Role of Information Communication Technology in Taking Scientific Knowledge/Technologies to the End Users" organized jointly with related national and regional organizations in New Delhi, on 10-11 January 2005. This was a part of APARIS/ APAARI activity. Another successful "Brainstorming Session on



Public-Private Partnership in Agricultural Biotechnology" was organized on 14 March 2005 under the umbrella of APAARI/APCoAB. In addition, Dr. Paroda also briefed about APAARI representation in some important meetings. These were: (i) Role of Biodiversity in Achieving UN-MDG of Freedom from Hunger and Poverty held in April 2005 in India, (ii) EFARD-2005 conference held in April 2005 in Switzerland, (iii) Global RAIS Meeting held in May 2005 in Cairo, Egypt, (iv) LEARN-IT Workshop of IRRI held in February in Bangkok, Thailand, and (v) FAO-RAP Project Consultation on Biosafety Program held in March 2005 in Bangkok, Thailand, by Dr. Gunasena, Dr. Noguchi, Dr. Sahdev Singh, and Mr. P.K. Saha, respectively. In addition, Dr. Iwamoto participated in the Stakeholder Committee on General Challenge Program at the invitation of GFAR to represent APAARI.

Dr. Paroda also apprised the members about training of three biotechnologists (2 from Thailand and 1 from India), during March 2005, in molecular breeding techniques in Japan with financial support from JIRCAS.

A brief account of the important decisions taken by the ExCo meeting is given below:

- (1) Current membership status of CAAS, CIRAD, ICIMOD was discussed. Regarding new membership, Bhutan (NARS) and PNG University of Technology have expressed their desire to join. Membership resumption by Indonesia (AARD), Malaysia (MARDI) and New Zealand Institute for Food and Crops Research are at different stages of negotiations because of their internal reorganization matters. ICRAF and CIP have been requested to join as Associate Member like other CG Centers.
- (2) Audited financial statement for the year 2004 was discussed and approved.
- (3) Work Plan for 2005 was discussed and approved. During 2005, main emphasis will be laid on further resource generation and publication of Success Stories.
- (4) Next Expert Consultation and Executive Committee meeting will be held in the first week of November 2005 somewhere in Thailand. It will be organized jointly with a meeting on "High Level Policy Dialogue on Agricultural Biotechnology for Asia and the Pacific".
- (5) The matters regarding appointment of Assistant Executive Secretary (AES) of APAARI and Coordinator of APCoAB were discussed and further action finalized.
- (6) The meeting also endorsed the proposal for renewal of MoU of APARI and IFPRI for the next 3 years.

On behalf of the Executive Committee, the Chairman Dr. Gunasena appreciated the immense contributions of the Executive Secretary Dr. Raj Paroda and the Secretarial staff of APAARI in carrying out its activities so efficiently. He also wished that APAARI would get more donor support in future to expand its activities

National Workshop on Role of Information Communication Technology in Taking Scientific Knowledge/Technologies to the End Users

10-11 January 2005, IARI (Pusa Institute), New Delhi

In a fast changing global environment, agriculture has to be more dynamic so as to harness the latest technologies and emerging opportunities due to globalization of agriculture. Hence, it is paramount that existing concern of "digital divide" and the future role of ICT are well understood and recognized. It is in this context, organizations such as Trust for Advancement of Agricultural Sciences (TAAS), National Academy of Agricultural Sciences (NAAS), Indian Society of Agricultural Statistics (ISAS) and the Asia-Pacific Association of Agricultural Research Institutions (APAARI) jointly organized a National Workshop on "Role of Information Communication Technology in Taking Scientific knowledge/Technologies to the End Users" on 10-11 January 2005 at the Indian Agricultural Research Institute, New Delhi. Around 70 experts representing different stakeholders i.e. Public Institutions (ICAR, DOAC, NIC, DBT etc.), NGOs, Foundations, Private Sector, Farmers' Commission, International Agricultural Research Centers etc. deliberated on all relevant issues by which ICT can become a catalyst of change in Indian agriculture.

The brainstorming sessions centered around current status, opportunities and constraints to make ICT a major player towards making India a developed nation through progress in agriculture sector, especially by linking producers with consumers. Following are the major recommendations:

1. ICT based initiatives for agricultural development, including farmers prosperity, should be multi-dimensional in nature, addressing problems of rural communities in holistic manner touching all aspects of rural life including agriculture, human/animal health, education, banking, governance, entertainment etc. This can be achieved by setting up rural knowledge centers using broadband connectivity with multi-media interactive modules in problem solving mode by developing a synergy among various stakeholders involved.
2. Knowledge intensive products and services for empowerment of our farmers are urgently needed. This would require a well coordinated system among government, public and private organizations. In this context, Indian Council of Agricultural Research (ICAR) and the Department of Agriculture and Cooperation (DOAC) under the Ministry of Agriculture can play a leading role in having a National Agricultural Information System (NAIS) established.



3. The existing knowledge dissemination agencies in the country such as ICAR Institutes, SAUs, KVKS/ATICS, NIC, IFFCO,

KRIBHCO, as well as other non-government and private sector institutions need to be networked rather than creating a new institution so that available information/knowledge is shared and transmitted freely to the end users. NAIS should work in a partnership mode ensuring complementarity and subsidiarity with assigned responsibility, authority and required resources. Institutions such as IARI and IASRI could jointly play the coordination role under NAIS.

4. Suitable mechanisms need to be developed for the creation of location specific knowledge capsules in the form of CD-ROM, Portals, Kiosks etc. through involvement of specialized institutions.
5. Complexities in the second-generation agriculture would require greater role of emerging ICT tools and methods in complementing the existing extension system. This would require capacity building of extension functionaries for the transfer of knowledge without dissemination losses to the end users. At the district level, the KVKS could in future play an important role provided given specific ICT mandate with commensurate human resource.

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6. Village level ICT should be the ultimate goal for easy access to required knowledge by the farming community. This could be achieved through promotion of Rural Information Clinics or Rural Internet Chaupals by the enthusiastic young entrepreneurs, well trained as ICT agents by the SAUs and ICAR institutions located throughout India. For access to knowledge at the farmers' door steps, above goal must be met.
7. There is also a need to reorient the agricultural extension curriculum so that extension workers in future are spatial and information specialist as well. The National Agricultural Research Systems (NARS) should be proactive in providing user friendly, need based and locally relevant trainings.
8. There should also be an emphasis on gender equity by letting women have easy access to ICT, ensuring gender oriented content, and the increased women participation in the application of ICT.
9. There is a strong need to establish joint ventures with the Private Sector and NGOs to enrich ICT resources in terms of both hardware and software, and the relevant content creation.
10. To empower agricultural community with needed information and knowledge in the coming decade (by 2015), the Government should come out with an Agricultural ICT Policy with a Mission oriented strategy to implement the same in a time bound manner. Only through such commitment at the highest level, we shall be able to address the concern of "Digital Divide" and empower our farmers to be worldly wise and most competitive.

APCoAB Third Steering Committee Meeting



The Third Steering Committee meeting of APCoAB was held on 28 June 2005 at NASC Complex, Pusa Campus, New Delhi, under the Chairmanship of

Dr. H.P.M. Gunasena, Chairman APAARI. It was attended by Dr. William D. Dar (ICRISAT), Dr. Mangala Rai (ICAR), Dr. Raghunath Ghodake (NARI), Mr. Natavudh Bhasayavan (DOA), Dr. Ranjana Smetacek (Monsanto), Mr. Bhagirath Choudhary (ISAAA), Dr. R.S. Paroda (APAARI), Dr. R.K. Arora (APCoAB) and Dr. Prabhat Kumar (ICRISAT) attended as an observer.

Dr. Gunasena delivered the Chairman's address and welcomed all the participants. He appreciated the progress of activities taken up by APCoAB during 2004-2005. He expressed concern on use of biotechnology to meet the needs of small farmers, and in addressing overall concern on food security and biosafety aspects. He also stressed the need for capacity building in the Asia-Pacific region. On behalf of APAARI, Dr. Gunasena specially thanked Dr. William Dar, Director General, ICRISAT for hosting the APCoAB Secretariat at its Delhi Office and providing logistic support.

Dr. Paroda made a power point presentation entitled 'APCoAB: An Update', highlighting APCoAB's activities undertaken during 2004-2005 and those being planned:

- i. Jointly organized the AVRDC/APAARI/APCoAB/CIMBAA workshop on 'Public-Private Partnership in the Use of Agri-biotechnology for Sustainable Solutions to Brassicas Pest Problems' held on 10 February 2005 at India Habitat Centre, New Delhi. Emphasis was on control of Diamond Back Moth (DBM), biosafety, resistance management and public



acceptance of GM vegetables. The workshop recommended the formation of a Consortium between Nunhems Seed Company and IARI, New Delhi and greater emphasis on technology that supports small farmers and addresses biosafety needs.

- ii. Brainstorming Session on Public-Private Partnership in Agricultural Biotechnology was held on 14 March 2005 at NARS Complex, New Delhi. The meeting recommended developing models for Public-Private Partnership based on case studies in some selected countries, addressing specific policy issues, build-up of trust and cooperation as well as capacity building and public awareness.
- iii. Capacity building: participation of three scientists (2 from Thailand and 1 from India) in training on Molecular Assisted Selection organized by JIRCAS, Japan.
- iv. Collaboration with INCANA in promoting research on hybrid cotton and Bt cotton, and initiated to bring out successful case study on Bt cotton in India.

Participation in meeting addressing Research Gap Analysis/ Research Need Assessment and Prioritization of Agricultural Research for Development in South and West Asia held at ICRISAT, 7-9 October 2004, and in the

Expert Consultation on Post Harvest Technologies for Enhancing Food Security and Value Addition for Enhancing Income, 1-3 December 2004 at Bangkok; both the meetings recommended greater focus on application of biotechnology including conventional approaches. The PHT meeting emphasized on development of cost-effective technologies for value addition, keeping in view the needs of small farmers.

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ICARDA
International Center for Agricultural Research in the Dry Areas
A Profile



The International Center for Agricultural Research in the Dry Areas (ICARDA) was established in 1977 to improve the welfare of poor people and alleviate poverty through research and training in dry areas of the developing world, by increasing the production, productivity, and nutritional quality of food, while preserving and enhancing the natural resource base. It is one of 15 centers strategically located all over the world and supported by the

Consultative Group on International Agricultural Research (CGIAR). With its main research station and offices based in Aleppo, Syria, ICARDA works through a network of partnerships with national, regional and international institutions, universities, non-governmental organizations and ministries in the developing world; and with advanced research institutes in industrialized countries. The partnership includes APAARI.

RESEARCH PROGRAM

ICARDA serves the entire developing world for the improvement of barley, lentil, and faba bean; and dry-area developing countries for the on-farm management of water, improvement of nutrition and productivity of small ruminants (sheep and goats), and rehabilitation and management of rangelands. In the Central and West Asia and North Africa (CWANA) region, ICARDA is responsible for the improvement of durum and bread wheat, chickpea, pasture and forage legumes and farming systems; and for the protection and enhancement of the natural resource base of water, land, and biodiversity. ICARDA also has a major interest in improving agricultural productivity in the highlands. In the West Asia and North Africa (WANA) region alone, highlands constitute about 40% of the total land area and contribute nearly 30% of the region's agricultural production. In WANA, highlands are found in Turkey, Iran, Afghanistan, and Pakistan in the east; and in Algeria and Morocco (the Atlas mountain range) in the west.

ICARDA's research program is designed to be consistent with priorities for agricultural research identified by national programs and is organized into six mega-projects:

- ◆ Management of scarce water resources and mitigation of drought
- ◆ Integrated gene management
- ◆ Improved land management to combat desertification
- ◆ Diversification and sustainable improvement of rural livelihoods
- ◆ Poverty and livelihoods analysis
- ◆ Knowledge management and dissemination for sustainable development

Management of scarce water resources and mitigation of drought

Water scarcity is a key characteristic of the dry areas. Countries worst affected by scarcity of water are found in ICARDA's eco-regional mandate area of CWANA. Already, 15 countries of the region are below the water poverty level. Renewable water resources are limited and rainfall is highly variable and unpredictable. Predictions are that the WANA region will not only get hotter but also drier, exacerbating water scarcity and increasing drought frequency. This will also worsen the already precarious livelihoods of the poor, especially in the rural areas, who depend on agriculture. ICARDA is working with national agricultural research systems (NARS) in the region to increase water productivity through better management of water resources, development of drought-tolerant and water-use efficient germplasm, and agronomic management of cropping systems. This requires, among other things, development of supportive policy options and building the capacities of farmers, extensionists and researchers.

Integrated gene management: conservation, improvement and sustainable use of agrobiodiversity

Several food, feed and horticultural crops originated in CWANA and their wild relatives and landraces are still found in the area. They have survived in the harsh, dry environments for thousands of years,



and therefore contain useful genes that can be used in plant breeding to produce varieties that can withstand the conditions in the region. However, the rising population and increased degradation of the land is causing their erosion. ICARDA is working with national programs to collect and store germplasm of these precious species in the field and in its genebank. In addition, ICARDA's breeding programs have led to the development of new and improved crop varieties that are released in various countries of the region and beyond.

Improved land management to combat desertification

The CWANA region encompasses a range of agro-ecosystems including drylands, irrigated lands, rangelands, mountains and deserts that have evolved in an environment of extremes. Much of the land is prone to degradation. Some degradation occurs naturally, but in many areas degradation is accelerated by human activities. They include overgrazing of rangeland, inappropriate land management that encourages soil erosion by wind and water, inappropriate irrigation management leading to salinization, and, degradation of the natural vegetative diversity. ICARDA aims to identify options for rehabilitating degraded land resources and, at the same time, to improve and strengthen systems of land management to control degradation and sustain future production.

Diversification and sustainable improvement of rural livelihoods

The goal of alleviating poverty in dry areas cannot be achieved by productivity increases alone. Innovative options are needed to diversify income generating opportunities available to rural households. Such options include the diversification of cropping systems and increasing the quality and end-use value of agricultural commodities. ICARDA's research in this area is, therefore, focusing on crop and livestock systems especially for smallholder farmers, household investment and marketing opportunities for value-added crop and livestock products and options to both increase and diversify the value of crop production.

Poverty and livelihoods analysis

Poverty is multifaceted. It is driven by social, political, economic and cultural aspects. If it is to be addressed, poverty in the dry areas must be understood and levels monitored over time. ICARDA is conducting research for a deeper understanding of the determinants of poverty, and of the livelihood strategies adopted by rural communities, using detailed analyses of the organization of households and communities through a sustainable livelihoods approach. Specific attention is given to the gender dimension of poverty and the structures that determine differential access to resources and income earning opportunities.

Knowledge management and dissemination for sustainable development

ICARDA's research efforts would be in vain if the knowledge generated is not disseminated to end-users. The Center is working on models of effective and efficient management and dissemination of information on technological, institutional and policy options; institutionalization of participatory and community-based research approaches; and strengthening research-extension linkages and enhancing extension capacity to serve end-users through new tools of information and communication.

REBUILDING AGRICULTURE IN CONFLICT AND POST-CONFLICT AREAS

Increasingly, ICARDA is faced with the challenge to contribute to rebuilding agriculture in countries affected by war, conflict, and natural disasters. Current conflict/post-conflict activities are in Afghanistan, Palestine and Iraq. The Center coordinated a partnership called the Future Harvest Consortium to Rebuild Agriculture in Afghanistan. The Consortium included the Afghan Ministry of Agriculture and Livestock, 10 CGIAR Centers, bilateral and multilateral donor agencies, and universities. ICARDA is working with the national program in Palestine to build capacity for agricultural research and the conservation of dryland agrobiodiversity. The collaborative research activities between ICARDA and Iraq have been ongoing since 1979; however, there are now renewed efforts to rebuild agricultural research in view of the destruction caused by war.

ECO-REGIONAL PROGRAM: COLLABORATIVE RESEARCH PROGRAM FOR SUSTAINABLE AGRICULTURAL DEVELOPMENT IN CENTRAL ASIA AND THE CAUCASUS (CAC)

Through an ICARDA initiative, the eco-regional program (ERP) for CAC was established in 1998 by a consortium of nine CG Centers (CIMMYT, CIP, ICARDA, ICRISAT, IFPRI, ILRI, IPGRI, ISNAR, and IWMI). IRRI has since joined the ERP and ISNAR's program has merged with IFPRI. Hence, the consortium continues to have nine CG Centers participating. The CAC region consists of Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan in Central Asia; and Armenia, Azerbaijan and Georgia in the Caucasus. The program, now in its ninth year, aims to improve productivity of agricultural systems, conserve the natural resources, including genetic resources, strengthen socioeconomic and public policy research and strengthen national programs. A Program Facilitation Unit (PFU) was established in Tashkent, Uzbekistan, hosted by ICARDA's regional office for Central Asia and the Caucasus and staffed by an internationally recruited Unit Head.

INSTITUTIONAL STRENGTHENING

Human resource development through formal and informal training programs is an important aspect of ICARDA's work. The Center has provided training to more than 13,000 participants from 100 countries since it was established. About 500 of these have

completed MSc and PhD degrees with co-supervision by ICARDA scientists. On average, 50 group training courses are conducted annually by ICARDA at its headquarters and at regional, sub-regional and national levels. Also, over 200 scientists come to ICARDA annually for individual training in various fields. In addition, an average of 30 conferences, workshops and scientific meetings are held annually at ICARDA's headquarters and a similar number at national and regional levels.

INTERNATIONAL COOPERATION

Cooperation with NARS is promoted through seven regional programs, each with a regional coordinator based in the region itself. The seven programs cover the following sub-regions/agroecologies: North Africa; the Nile Valley and Red Sea; West Asia; the Arabian Peninsula; the Highlands; Central Asia and the Caucasus and Latin America. Besides enhancing complementarity in agricultural research and exchange of technology and germplasm between ICARDA and NARS, these programs enhance the development of intra- and inter-country linkages, research coordination and management, and effective networking within each sub-region. In

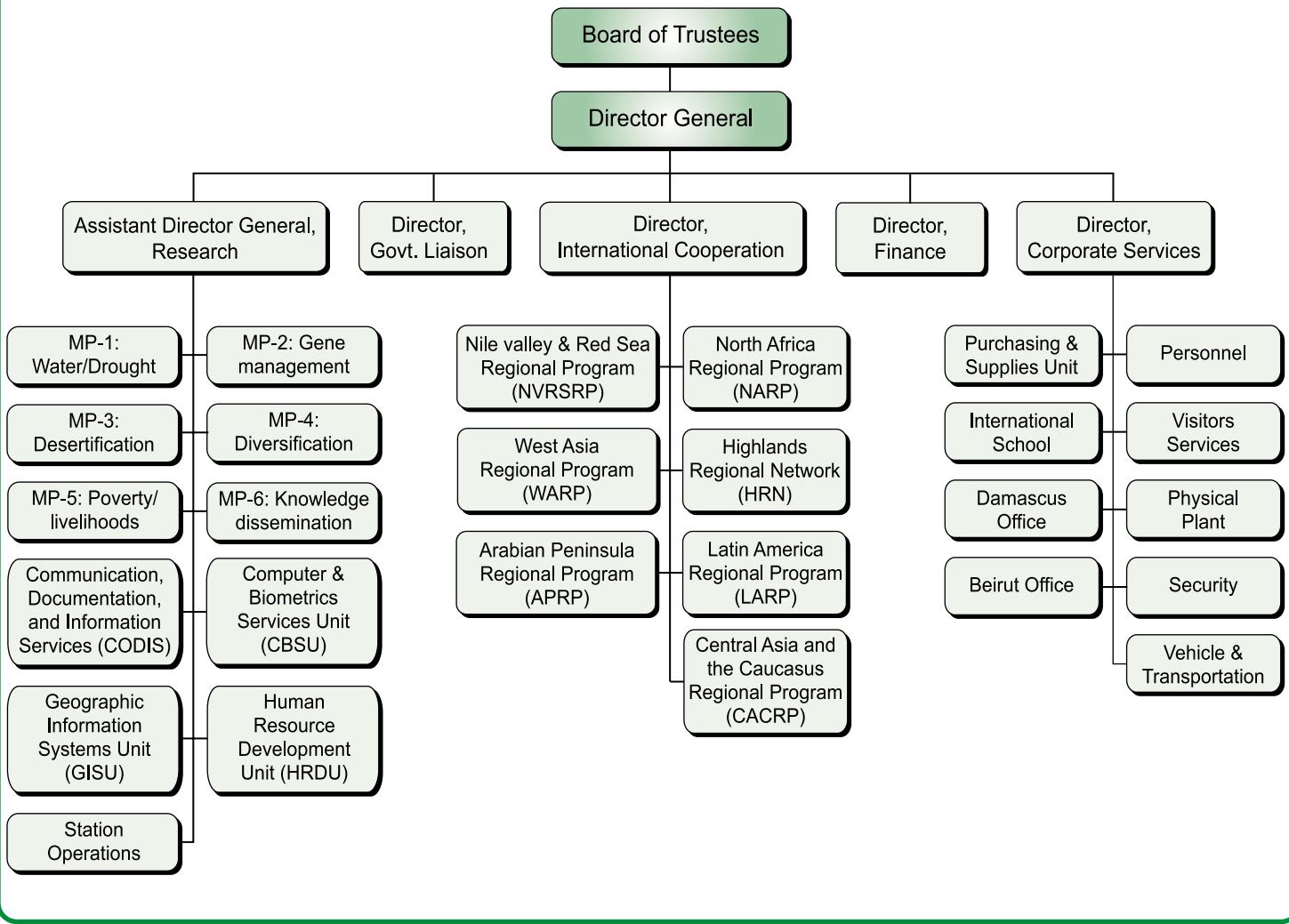
collaboration with NARS, technology transfer and its adoption by farmers is promoted through these programs by contributing to the development of multi-disciplinary research teams involving national scientists, extensionists and farmers. This ensures a research continuum between ICARDA's research programs and those of the NARS.

FACILITIES

At its headquarters near Aleppo, ICARDA has a 948-ha farm, and its offices and laboratories. There are extensive greenhouse and other controlled environment facilities at the station. Specialized laboratories include those of biotechnology, geographic information systems, pathology, entomology, virology, physiology, seed health, soil physics, soil fertility, food and feed quality, and animal health and nutrition. A modern library and a publishing facility including a graphic arts unit, a photo unit, a typesetting unit and a printshop are also available. A computer and biometric services unit provides support in the use of all computer facilities, software packages and hardware maintenance. The biometric services address the needs of researchers in the design of experiments and data computing and analysis. A geographical information systems unit provides support in geo-referencing and remote sensing.



ICARDA Organizational Chart



CONCLUSION

In the last 27 years, ICARDA has made a substantive contribution to agricultural development and improvement in livelihood of the poor, especially in CWANA region. The main achievements include:

More than 800 improved cereal and legume varieties released by national programs in partnership with ICARDA, and adopted by farmers world wide.

ICARDA's gene bank holdings of more than 132,000 germplasm accessions, including landraces and wild relatives of crops, from all over the world. Over 28,000 samples are distributed each year to cooperators throughout the world.

Technologies to improve crop and livestock production systems, water harvesting, on-farm water-use efficiency, and rangeland rehabilitation developed and shared with national programs.

More than 13,000 persons from 100 countries trained, and research supervision and facilities provided to about 500 graduate students.

Playing a lead role in rebuilding agriculture in countries affected by conflict and natural disasters, such as Afghanistan, Eritrea, Ethiopia, Iraq, Palestine, and Sudan; or political reorganization, such as the newly independent countries of Central Asia and the Caucasus.

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The workplan for 2005 was presented. It was emphasized that APCoAB will focus on (i) the follow-up of the recommendations of the above PPP workshops/meetings including public awareness activities; (ii) capacity building in biosafety and GM seed detection with FAO and JIRCAS; (iii) publications of status report on Bt corn in the Philippines (the draft of which was provided to all participants) and on Bt cotton in India; (iv) bring out important case studies on use of conventional biotechnologies such as on date palm in Iran with focus on South Asia (India, Pakistan) and West Asia; micro-propagation in sugarcane and potato in India; orchid tissue culture in Thailand; and (v) undertake/promote public awareness activities in India, Philippines, Thailand and Vietnam. He pointed out that though MoU is not formalized with ISAAA, but cooperation in joint activities in core areas such as database development, joint

publications/translations, can be taken up considering the common interests. Dr. Paroda stressed that APCoAB could be an inter-regional initiative, gradually expanding its collaboration/partnership to become a Global Partnership Program (GPP) under GFAR umbrella.

The audited accounts for the period 1 January to 31 December 2004, and from 1 January to 30 April 2005 were approved. The support of the Rockefeller Foundation, MONSANTO, MAHYCO, GFAR and FAO was highly appreciated.

The matter of APCoAB Coordinator's appointment was discussed in greater details and various options considered. It was decided that in view of fund constraint, a competent senior scientist be taken on deputation from the Indian NARS.

World Agroforestry Centre Established at CARP, Sri Lanka

Sri Lanka Council for Agricultural Research Policy (CARP) signed a Memorandum of Understanding with the World Agroforestry Centre, formally the International Center for Research in Agroforestry (ICRAF), for Scientific and Technical Cooperation in Research and Training on Agroforestry, in September 2004. The MoU envisages to promote the development of cooperation in the field of research and training in agroforestry and improvement of production techniques and extension through: (a) exchange of scientists and technologies; (b) exchange of technologies and scientific information; and (c) import and export of scientific equipment as required for the programmes of common interest. Such cooperation will be implemented by means of establishing mutual relations between the scientific and technical divisions of the organizations of the respective parties and creation of facilities for exchange of scientists, technologists and experts and their proper placements.

To facilitate these activities, ICRAF Sri Lanka Office was inaugurated on 7 March 2005 at the CARP Secretariat by Mr. Tissa Warnasuriya, Secretary, Ministry of Agriculture, Livestock, Lands and Irrigation and Chairman of CARP.

Dr. Tony Simons, Principal Tree Scientist of the World Agroforestry Centre, Dr. V.P. Singh, South Asia Regional Representative of the World Agroforestry Centre, Prof. H.P.M. Gunasena, Executive Director, CARP and Dr. DKNG Pushpakumara, the World Agroforestry Centre's (ICRAF) Country Liaison Scientists were also present. Sri Lanka became 30th member country of ICRAF.

Prof. H.P.M. Gunasena, Executive Director of CARP, in his welcome address, explained how the programme will benefit Sri Lankan agriculture, particularly the rural farming communities. According to ICRAF's Vision, although trees contribute substantially to rural livelihoods and national economies, their contributions are not yet adequately quantified or appreciated. With less than one tenth of a hectare of natural forest remaining per person in Sri Lanka, trees on farms are often more important to supply tree products and directly benefit the rural poor.

Obsolete policy objectives in developing countries act as barriers to greater investment by farmers and entrepreneurs. Small-scale



Dr. Tony Simons (left) and Prof. H.P.M. Gunasena (right) at the Inauguration of the ICRAF Office at CARP Secretariat

farmers are mostly ill equipped to diversify and add value to their tree products. National planners in the country are also ill equipped, since, few analyses have been carried out on the cultivation and commercialization of tree products. Markets for tree products are poorly organized and perform sub-optimally, leading to loss of income for producers, spoilage of perishable tree products and restricted choice for consumers. Lack of market price transparency, as well as the absence of processing techniques to add value to tree products, further disadvantages the rural poor.

The objective of CARP-ICRAF Tree Domestication Project is to network domestication research and development activities on fruit and timber trees and medicinal plants in Sri Lanka. This project will be a part of the South Asia Network of Tree Domestication with India, Nepal and Bangladesh. The project will help partners to use, enhance and adapt these systems, and to identify and remove policy constraints. It will also develop models for germplasm management, as well as systems to conserve genetic resources, allow small farmers to benefit from these resources, and protect their property rights.

Sri Lanka-Pakistan Agricultural Research Cooperation Strengthened



Sri Lanka Council for Agricultural Research Policy, (CARP) and Pakistan Agricultural Research Council (PARC) signed an Agreement of Understanding for cooperation in agricultural research and development activities. This historic agreement was signed during the recent visit of Her Excellency President of Sri Lanka Chandrika Bandaranaike Kumaratunga to Pakistan, at which several other free trade agreements were signed. The agreement for mutual cooperation in the field of agriculture and livestock production with Pakistan will make a milestone in the ties between Sri Lanka and Pakistan. In

the past, Sri Lanka and Pakistan maintained close cooperation in agriculture and related fields, particularly in the trade of agricultural commodities.



This agreement will be highly beneficial to both countries to share information and benefits from the spillovers of advances of basic and applied research, avoid duplication and reduce high cost of technology generation. The agreement with PARC is more biased towards the development of the livestock sector. There is provision in the agreement to develop the dairy sector through transfer of advanced technologies and materials.



*Protocol between Sri Lanka and Pakistan signed in the presence of H.E. President of Sri Lanka Chandrika Bandaranaike Kumaratunga
(Picture by Sudam Gunasinghe)*

A major drawback in the development of the dairy sector is the non-availability of high quality animals, both neat cattle and buffaloes. Although some progress has been made in upgrading dairy cattle through artificial insemination its impact has not been significant. Therefore, other methods of upgrading cattle have to be resorted to if this sector is to be developed in a short period. In the agreement with Pakistan, special provision has been made for the use of advanced techniques for upgrading of livestock such as embryo transfer technology, semen-processing technology in buffaloes and use of vaccines for maintaining animal health.

In addition, there is also provision for the training of scientists in different fields depending on the training needs of the countries. The training programs may be for short duration to update the knowledge and skills of scientists in a specific field or to acquaint with a specific technique. Long-term training at masters or doctorate level is also possible under this agreement. The long term training will benefit the agricultural sector to train core groups of scientists in priority fields of current importance such as use of biotechnology tools in crop and livestock improvement, post-harvest processing and value addition to agricultural produce.

National Awards for Sri Lankan Agricultural Scientists

The CARP has initiated the National Agricultural Research Awards Scheme to recognize scientists who have made outstanding contributions to agricultural research. The objective is to encourage and motivate them for more dedication and commitment to development of new innovations to accelerate the development of the agricultural sector. Under this scheme, three cash prizes of Rs. 500,000, 250,000 and 100,000 will be awarded for the most outstanding contributions to agricultural research.

The first National Agricultural Research Awards Ceremony was held on 6th October 2004 at the Presidential Secretariat under the distinguished patronage of Her Excellency Chandrika Bandaranaike Kumaratunga, President of Sri Lanka, Hon. Anura Kumara Dissanayake, Minister of Agriculture, Livestock, Lands and Irrigation, and Hon. Bimal Ratnayake, Deputy Minister, Ministry of Agriculture, Livestock, Lands and Irrigation. Present on this occasion were Mr. Tissa Warnasuriya, Secretary, Ministry of Agriculture, Livestock, Lands and Irrigation and Prof. H.P.M. Gunasena, Executive Director, Sri Lanka Council for Agricultural Research Policy.



H.E. President of Sri Lanka Chandrika Bandaranaike Kumaratunga attending Ceremony of the National Agricultural Research Awards

Dr. Borlaug Receives First Dr. M.S. Swaminathan Award

In a well attended glittering function, Hon'ble President of India Dr. A.P.L. Abdul Kalam presented the First Dr. M.S. Swaminathan Award for Leadership in Agriculture to the Noble Peace Laureate Dr. Norman E. Borlaug on 15 March 2005 at Vigyan Bhawan, New Delhi, India. This Award has been instituted to honor eminent scientists, who have demonstrated great leadership qualities in agriculture and have made impact towards food security and poverty alleviation. The Award is named after the world known agricultural scientist and father of the Green Revolution in India Dr. M.S. Swaminathan, and will be given biannually by the Trust for Advancement of Agricultural Sciences (TAAS), which is chaired by Dr. Raj Paroda, Head, PFU-CGIAR and Regional Coordinator, ICARDA-CAC. The Trust was established in 2002 to link science with society for overall agricultural development.



Brainstorming Session on Public-Private Partnership in Agricultural Biotechnology

14 March 2005, New Delhi



APCoAB, in an attempt to bring together key partners, organized a Brainstorming session on "Public-Private Partnerships in Agricultural Biotechnology" on 14 March 2005 at the National Academy of Agricultural Sciences (NAAS) Campus, New Delhi. It was attended by nearly 40 participants including representatives from different Ministries of Government of India, private sector, CG Centers and the NGO's.

In his Welcome Address, Dr. R.S. Paroda, Executive Secretary, APAARI emphasized the importance of Public-Private Partnerships in the field of agricultural biotechnology for the ultimate benefit to the resource poor farmers.

He opined that strengthening of stakeholder's partnership, improvement in dialogue with policy makers, capacity building and increase in public awareness are the four pillars that can promote agricultural biotechnology in India. Hence, this brainstorming was critical to bring key stakeholders together to discuss and devise ways and mechanisms that could accelerate the win-win partnership between Public-Private sector institutions.

Dr. G. Kalloo, Deputy Director General (Crop Sciences and Horticulture, ICAR), in his inaugural address, advocated introspection and reorientation of the research being carried out by the public sector in India and the kind of partnerships that can emerge out of it. He commented that Public-Private sector relationship should be addressed in the right perspective and with



an open mind.

Dr. S. Nagarajan, Director, IARI expressed the need for a Business Development Cell (BDC) in public institutes to take care of Intellectual Property Rights (IPR) issues, Material Transfer Agreement (MTA), benefit sharing, and development of prototypes

for signing of the agreements. Along with this, he also expressed the need development of human resources such as scientists, economists and managers who not only invent but also assign some economic value to their inventions and try to attract private firms for required negotiations.

The Brainstorming meeting was organized in three main sessions. These were: i) Importance of Public-

Private Partnerships, ii) Commercial release-Possible Models of Partnerships, and the iii) Plenary session.

The general recommendations for adoption developed during the meeting were as follows:

All the participants voiced that Public-Private Partnership is the need of the hour and such partnership will strengthen percolation of biotechnologies to the poorest of the farmer. These partnerships will be beneficial to both as their strengths are complimenting each other. These partnerships will reduce the time between the development of the technology and its reaching the end user-farmer.

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Public-Private Partnership in Agricultural Biotechnology Recommendations

Policy

- ♦ The specific areas of co-operation between the Public-Private Sector should be identified urgently, and thereafter the goals be set-up by developing a proper plan of action and monitored at the highest policy level on the both sides.
- ♦ Simplified mechanisms need to be developed in public sector for entering into the partnerships with private sector. Decision making process should be lot more quicker and decentralized.
- ♦ Need for a declared National strategy for promoting PPP in agri-sector.
- ♦ A well-understood mechanism between the Public-Private Sector partners for IPR, especially the benefit sharing needs to be evolved.
- ♦ Steps will have to be taken so that there is 'mutual trust' building between the Public and Private sectors, especially in terms of IPR related issues, benefit sharing and the public awareness, ensuring win-win situation for both sides.
- ♦ Regulatory mechanisms need to be simplified and streamlined as a single-window system for speedy testing and clearance of useful products.

HRD

- ♦ Public sector has to bring in corporate culture in order to reap the benefits of scientific innovations in the field of agricultural biotechnology.

- ♦ Human resource should be developed in scientific, policy and legal matters to move forward. Examples from other countries such as Korea and China may be studied.

Capacity Building

- ♦ Privates sector should also invest in basic research in some of the priority areas for the development of agricultural biotechnology and to have a balance between their profits and the social obligations.
- ♦ Public sector should encourage setting-up knowledge alliances with private industry either bilaterally, or in a consortium mode in the new and emerging areas of science and technology.
- ♦ Statutory autonomy for institutions including agri universities.

Infrastructure

- ♦ Set-up incubation centres, in few selected laboratories/institutions, in specialized areas for nurturing start-up companies and encouraging early stage innovations through appropriate partnership mechanisms.

As a follow up, it was agreed to forward these recommendations to all concerned policy makers and have a second round of discussions around specificities of available models of partnerships which could further be developed and promoted for required benefit to the end-users as well as for further growth and development of Indian Agriculture.

Pacific Islands Biotechnology Working Group Formed

Representatives of the national, regional and international organizations engaged in biotechnology related work in the Pacific Islands Region met in Nadi, Fiji, during 14-17 February 2005 and took a decision to form a Pacific Islands Biotechnology Working Group. The activities of the Group will be initially coordinated by the secretariat of the Pacific Community with active involvement of the national, regional and international agencies. The commitments of the Group will be as follows:

- ♦ Calling upon Pacific Island Governments to formally recognize the role of science and technology for sustainable development in the Pacific Island Countries.
- ♦ Identification of the Working Group as the focal point for regional, inter-regional and international networking on biotechnology.
- ♦ To undertake a broad-based and inter-sector public awareness and education effort to ensure a wide recognition of the contributions of Pacific Island Countries and communities.
- ♦ Identification of specific, tangible areas for biotechnology – priority capacity building.
- ♦ Establishment of an on-line register of Pacific Biotechnology capacity to ensure optimal coordination and utilization of existing Pacific expertise.

The Group requested to include Dr. Mary Taylor of the Secretariat of the Pacific Community in Suva, Fiji, as a representative of the Pacific to the Network. Subsequent participation of the members of the Working Group in the Network activities will take place on rotating basis to be elaborated by the Working Group. Mr. Hans Thulstrup of the UNESCO Office for the Pacific States will provide support for participation in the Network activities.

Statement by Mr. H.D. Thulstrup, Science Programme Specialist, UNESCO Office for the Pacific States at a Board meeting of the Regional Network for Microbiology and Microbial Biotechnology in Southeast Asia, Bangkok, on 11 March 2005.

ICUC moves to Sri Lanka



The International Center for Underutilized Crops (ICUC) and the International Water Management Institute (IWMI) are pleased to announce the

relocation of ICUC's Headquarters from the United Kingdom to Sri Lanka, with effect from April 2005. The ICUC is now co-located and hosted by IWMI at its Headquarters in Colombo, Sri Lanka.

ICUC's move to IWMI is expected to provide greater synergy to the programs of both institutes through its research activities. For example, the ICUC's strategic theme Improving Degraded Land through use of Underutilized Crops is closely linked to IWMI's research theme on Land, Water and Livelihoods. Hence, both institutions will greatly benefit by working together on research projects of mutual interest such as "The potential of underutilized crops to contribute to the drought coping strategies of the poor" and "The potential of underutilized crops to grow under wastewater reuse conditions."

Since the founder Director of the ICUC Dr. Nazmul Haq is retiring soon, a new Director will be appointed shortly. The ICUC and IWMI will be working in close collaboration in developing a partnership of mutual cooperation. The global program of ICUC will continue to be run through its existing network in Africa, Asia, Europe and Latin America. For more information on ICUC's move to IWMI, please contact Prof. Frank Rijsberman, Director General of IWMI (iwmi@cgiar.org).

For more information on the ICUC Program, please contact Dr. Nazmul Haq: director_icuc@cgiar.org or visit the ICUC web site: www.civil.soton.ac.uk/icuc/

The Call for Maize Mounts in Asia

The demand for maize in Asia is expected to skyrocket in the next two decades, driven primarily by its use for animal feed. In the uplands of seven Asian countries, however, demand is also increasing in the farming households who eat the maize crops they grow. CIMMYT and the International Fund for Agricultural Development (IFAD) have recently completed a project promoting food and livelihood security for upland farmers in Asia who depend on maize for food and feed.

By 2020, the International Food Policy Research Institute (IFPRI) estimates that demand for maize in all developing countries will surpass the demand for wheat and rice, with Asia accounting for over half of this growth. Responding to these predictions, teams of researchers visited farmers in the uplands of China, India, Indonesia, Nepal, the Philippines, Thailand, and Vietnam to discover ways in which maize technologies could improve livelihoods.

To further develop maize improvement recommendations, national workshops and seven publications built upon the farmer surveys. Careful planning and appropriate procedures on the part of scientists and policy makers will ensure an easier transition as farmers face the oncoming demand. A clear message that emerged from the study in Vietnam, for example, was the need to help farmers apply sustainable practices to avoid degrading natural resources particularly in fragile, marginal settings as the demand intensifies.

These conclusions were drawn by researchers conducting rapid rural appraisals with farmers in commercial and semi commercial systems in the up- and lowlands of these seven countries. In addition to CIMMYT and IFAD, the project involved collaboration with IFPRI, Stanford University, senior officials of national research programs, and ministries of agriculture.

Source: SeedQuest.com



Second Inter-Regional Workshop Organized by GFAR

1. GLOBAL.RAIS Project

The Second Inter-Regional Workshop “Moving forward within the ICM4ARD Framework” was organized by GFAR in Cairo, Egypt from 10-11 May 2005. The GLOBAL Alliance of the Regional

Agricultural Information Systems (GLOBAL.RAIS) was a project funded by the European Commission. This project started in February 2003. The main goal of the GLOBAL.RAIS project was to assist the regional Fora to develop and implement their own regional agricultural information system. In order to harmonise activities at several levels, from the national to the regional and global, it was decided to hold a set of regional consultations initiated and supported by GFAR Secretariat and with the active participation of FAO, with the goal of enabling the five regional Fora to define their own strategy in the area of ICM for ARD. These regional consultations culminated in June 2004 with an inter-regional consultation in FAO headquarters, Rome, the main purpose of which was to define a global agenda in the area of ICM for ARD, while achieving economies of scale and synergism to the RAIS.

2. Lessons Learned from the First Inter-regional Consultations

This first inter-regional meeting brought to the fore the significant inequality in availability, access and ability to use agricultural related information by GFAR Stakeholders. It has also highlighted that social appropriation rather than technology is the driving force for improving information systems. The meeting agreed that (1) Advocacy for sensitization, awareness and resources mobilization, (2) Capacity development, (3) Integration of ICT enabled information systems and services, and (4) Governance should be the four main pillars to be addressed by GFAR and its stakeholders in the Development of a Global Partnership Program (GPP) for ICM for ARD (ICM4ARD). This consultation process has also revealed the huge potential available in enhancing information systems and services for ARD through collaborative platforms and cooperative programs that can be utilized in its execution. This concept of collaborative platform was thoroughly kept in mind by the GFAR Secretariat. The main recommendation of the Inter-Regional Workshop was to move forward and initiate the development of the mechanisms that enables the establishment of a GPP on ICM for ARD that aims to achieve more impact for RAIS and NAIS through inter-regional collaboration and synergism.

3. The ICM4ARD Proposal

Consistent with the recommendations of the first regional consultation, a Global Partnership Program, ICM4ARD, was defined and the project summary is as follows:

- ◆ **Project title:** Global Partnership Project on Information and Communications for Agricultural Research and Development (ICM4ARD).
- ◆ **Project proposed by:** GFAR, AARINENA, APAARI, CACAARI, FARA – together with the Association for Strengthening Agricultural Research in East and Central Africa (ASARECA), the Conseil Ouest et Centre Africain pour la Recherche et le Developpement Agricoles (CORAF) and the Southern African Development Community (SADC), and the Foro Regional de Investigaci Desarollo Tecnolo Agropecuario (FORAGRO).
- ◆ **Project goal:** Strengthen national, regional and global agricultural information systems to satisfy the needs of an emerging, more knowledge intensive agriculture that now needs information on a wider range of topics beyond that available within local communities.
- ◆ **Purpose of the project:** To enable more equitable access to agricultural information globally for ARD stakeholders through improved ICM and more efficient use of ICT in National, Regional and Global agricultural information systems.
- ◆ **Project outputs:**
 - ❖ Improved Capacity in NARS, ROs/SROs , GFAR leaders for advocating development of ICT enabled AIS at their respective levels.
 - ❖ Capacity Development of ICT managers and staff of NAIS, Sub-RAIS (S-RAIS) and RAIS in further developing NAIS and RAIS
 - ❖ Integration of and equitable access to National, Regional and Global Agricultural Information through GLOBAL.RAIS Web Ring
 - ❖ New Governance structures for ICT enabled information systems at regional and global levels.
- ◆ **Project duration:** 3 years.

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In Asia-Pacific Region, APARIS initiative has already moved forward with identification of National Information Nodal Points (NINPs), establishment of APARIS Steering Committee, publication of status report on ICT in the region and holding of three regional meetings to catalyze NINPs and NARS leaders with regard to sharing of information and have links established through respective web sites of different institutions. During 2005, APARIS proposes

to organize following activities in collaboration with Asian Institute of Technology (AIT), Bangkok:

1. Regional Training Workshop of NAIS Officers.
2. APAARI Success Story on ICT/ICM in ARD.
3. Asia-Pacific NARS on CD.
4. Inter-regional Workshop of RAIS and Global AIS Managers.

Preserving the World's Agricultural Crop Diversity

“The Global Crop Diversity Trust (GCDT) has been established to halt the loss of irreplaceable crop diversity so that genes from current and past crops and their wild relatives can be harnessed for future varieties,” said Mr. Julian Laird, Director of Development at the Global Crop Diversity Trust, Headquartered in Rome. The United Nations predicts that the world population will pass nine billion by 2050, an extra two and a half billion mouths to feed, and without a concerted effort now to protect our agricultural raw materials we will simply not be able increase yields to meet this predicted demand. Agricultural biodiversity is under threat from habitat destruction and displacement by improved varieties. As a result, guaranteeing facilities to conserve, manage and reproduce the diversity of crop varieties into the future is integral and the growing number of governments, industry and foundations supporting the Trust reflect this. According to the Trust, there are well over a million crop varieties which have evolved over thousands of years through a dynamic interaction between nature and careful selection and breeding by farmers and plant scientists.

GCDT has been set up by a partnership between the Consultative Group on International Agricultural Research (CGIAR), and the

Food and Agriculture Organization of the United Nations. It will serve as an element of the fundraising strategy of the International Treaty on Plant Genetic Resources for Food and Agriculture, which came into force in 2004. To achieve its aims, the Trust will raise around US\$ 260 million and disburse funds and, in particular, build and manage an endowment whose proceeds will provide a permanent source of financial support for collections around the world.

The mission of the Trust is to ensure the long-term conservation and use of crop diversity for food security worldwide. The Trust will:

- (i) promote and assist the development of an efficient and effective system for conserving crop diversity around the world;
- (ii) help salvage the world's most important collections of crop diversity and guarantee their permanent healthy and safe management;
- (iii) provide funds to upgrade and build the capacity of collections seeking to become eligible for ongoing support.

Source: SeedQuest.com

High Level Policy Dialogue to be held in Thailand

A “High Level Policy Dialogue on Biotechnology for Food Security and Poverty Alleviation: Opportunities and Challenges” will be organized jointly by FAO, APAARI/APCoAB, GFAR, in Bangkok, Thailand from 7-9 November 2005 to assess the current status of technologies and their application in the Asia-Pacific Region. It is intended to ensure that member countries in the region are strengthened in their overall research capabilities including agricultural biotechnologies, research and development at the regulatory level in order to meet the potential and challenges of the new technologies. A dialogue will be based on sound scientific principles allowing fair evaluation of its social-economic implications; environmental and trade issues etc. The need assessment, both for human resource and financial resources for infrastructure will be discussed. The overall objective is to assess requirements of the NARS and respond to the challenges in regional context to contribute to food and nutritional security, food safety and sustainability of agriculture. Overall the meeting will cover the following aspects:

- ◆ Assess the current status of R&D infrastructure in the NARS of the Asia-Pacific, and review NARS experiences concerning application of conventional breeding techniques and modern biotechnology.
- ◆ Understanding the technologies presently available and prioritize on their suitability for the respective NARS/countries focusing on specific national needs and also common concerns in regional context.
- ◆ Identify gaps both in terms of capacities and infrastructure for adopting the technologies.
- ◆ Develop short/long-term policies and orientation of research (including biotechnology) towards meeting the needs of small

farmers in particular and addressing food security concerns.◆ Assess existing policies and identify means to harmonize national and international legislations and develop standards of regulations and governance, which would ensure health and environmental safety and lead to sustainable agriculture.◆ Developing information, communication and public awareness to interlink NARS for information on available technologies.◆ Implications of socio-economic and political dimensions/ethical issues.◆ Prioritize needs of the NARS for training, capacity building of various aspects on technology adoption and policy dimensions.◆ Workout regional collaboration for research and development with FAO, CG centers, other organizations focusing on both specific and common research agenda as per capabilities of the organizations, impart trainings/human resource development, capacity building, public awareness, communication and information system in regional context. The regional needs and the global concerns are to be viewed collectively in the context of FAO, CG developmental goals.

Considering the diverse issues to be discussed in this dialogue to cater to the needs of the NARS in the Asia-Pacific, this regional meeting will have wider participation of diverse stakeholders. The participants will include Ministers from different countries/policy makers, senior managers, research scientists, technical/regulatory experts, representatives from industry/private sector, international organizations such as CG centers, ACIAR, JIRCAS, ICGEB, ISAAA, regional organizations such as SPC, SEARICE, NGO's and the organizers namely FAO, GFAR, APAARI/APCoAB.

APAARI Members

MEMBERS

- ◆ ACIAR-Australian Centre for International Agricultural Research
- ◆ AREO-Agricultural Research and Education Organization (Iran)
- ◆ BAR-Bureau of Agricultural Research (Philippines)
- ◆ BARC-Bangladesh Agricultural Research Council
- ◆ CARP-Sri Lanka Council for Agricultural Research Policy
- ◆ COA-Council of Agriculture (Chinese Taipei)
- ◆ DOA-Department of Agriculture (Thailand)
- ◆ IAC-Institut Agronomique Neo-Caledonien (New Caledonia)
- ◆ ICAR-Indian Council of Agricultural Research
- ◆ JIRCAS-Japan International Research Centre for Agricultural Sciences
- ◆ MAFF-Koroniva Research Station, Ministry of Agriculture, Forestry and Fishery (Fiji)
- ◆ MARD-Ministry of Agriculture and Rural Development (Vietnam)
- ◆ MARDI-Malaysian Agricultural Research and Development Institute
- ◆ MCFF-Ministry of Commerce, Forests and Fisheries (Western Samoa)
- ◆ NARC-Nepal Agricultural Research Council
- ◆ NARI-National Agricultural Research Institute (Papua New Guinea)
- ◆ PARC-Pakistan Agricultural Research Council
- ◆ PCARRD-Philippine Council for Agriculture, Forestry and Natural Resources Research and Development
- ◆ RDA-Rural Development Administration (Republic of Korea)
- ◆ University of Technology (Papua New Guinea)

ASSOCIATE MEMBERS

- ◆ AVRDC-World Vegetable Centre
- ◆ CIMMYT-International Maize and Wheat Improvement Centre
- ◆ ICARDA-International Centre for Agricultural Research in the Dry Areas
- ◆ ICBA-International Centre for Biosaline Agriculture
- ◆ ICIMOD-International Centre for Integrated Mountain Development
- ◆ ICRISAT-International Crops Research Institute for the Semi-Arid Tropics
- ◆ IFPRI-International Food Policy Research Institute
- ◆ ILRI-International Livestock Research Institute
- ◆ IPGRI-International Plant Genetic Resources Institute
- ◆ IRRI-International Rice Research Institute
- ◆ IWMI-International Water Management Institute
- ◆ UNESCAP-CAPSA-Centre for Alleviation of Poverty through Secondary Crops' Development in Asia and the Pacific (Indonesia)
- ◆ The World Fish Center

RECIPROCAL MEMBERS

- ◆ AARINENA-Association of Agricultural Research Institutions in the Near-East and North Africa (Jordan)
- ◆ AIT-Asian Institute of Technology (Thailand)
- ◆ APAFRI-Asia-Pacific Association for Forestry Research Institutions (Malaysia)
- ◆ APSA-The Asia and Pacific Seed Association (Thailand)
- ◆ NACA-Network of Aquaculture Centers in Asia-Pacific (Thailand)

Recent APAARI Publications

SUCCESS STORIES

Sustaining the Green Revolution in India (2004/3) by Dr. S. Nagarajan

Some Success Stories in Classical Biological Control of Agricultural Pests in India (2004/2) by Dr. S.P. Singh

Rainbow Trout (*Oncorhynchus mykiss*) Culture in Himalayan Kingdom of Nepal (2005/1) by Dr. A.K. Rai

OTHER PUBLICATIONS

Proceedings of Expert Consultation on Post-harvest Technologies for Ensuring Food Security and Value Addition for Enhanced Income and the Eighth General Assembly Meeting of APAARI. 1-3 December 2004, Bangkok, Thailand.

Brainstorming Session on Public-Private Partnership in Agricultural Biotechnology (Highlights & Recommendations), 14 March 2005, New Delhi, India.

GFAR 2006 Conference to be held in India

The next GFAR triennial General conference will be held in 2006. All of the regional fora which are yet to host this conference were consulted as to their willingness to host the 2006 version. APAARI sent very strong and positive signals, and during the Extraordinary Steering Committee meeting held in December 2004 in Rome, the Executive Secretary of APAARI, Dr. Raj Paroda informed the committee of the willingness of the Indian Government to host the Conference in India. The Executive Secretaries of APAARI and GFAR have since then had further discussions with the Indian authorities with regards to the dates, venue and other important details. Based on these preliminary discussions, it has been decided to hold GFAR 2006 Conference in November at New Delhi. A formal announcement on the venue and dates for GFAR 2006 will be soon posted on EGFAR.

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