

# THE SIXTH GENERAL ASSEMBLY OF APAARI & EXPERT CONSULTATION ON STRATEGIES FOR IMPLEMENTING APAARI VISION 2025: AGRICULTURAL RESEARCH FOR DEVELOPMENT IN THE ASIA-PACIFIC REGION

*8-10 November 2000, Chiang Rai, Thailand*



## PROCEEDINGS



**ASIA-PACIFIC ASSOCIATION OF AGRICULTURAL RESEARCH INSTITUTIONS**  
FAO REGIONAL OFFICE FOR ASIA AND THE PACIFIC  
BANGKOK

**The Sixth General Assembly of APAARI  
&  
Expert Consultation on Strategies for Implementing  
APAARI Vision 2025: Agricultural Research for  
Development in the Asia-Pacific Region**

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## PREFACE

The Asia-Pacific Association of Agricultural Research Institutions (APAARI) is a neutral regional forum that promotes and facilitates collaboration and coordination among national, regional and international organizations such as NARS, IARCs/CGIAR, GFAR, ACIAR, FAO, IFAD etc. APAARI works in partnership mode with its stakeholders to strengthen inter-institutional linkages, particularly providing NARS a platform to exchange views and information on agricultural research and development.

Since its establishment in 1990, it has geared NARS activities and made several important contributions one of which is the development of APAARI Vision 2025. These Proceedings deal with the deliberations, based on presentations and discussions, of the "Expert Consultation on Strategies for Implementing APAARI Vision 2025: Agricultural Research for Development in the Asia-Pacific Region", held recently at Chiang Rai, Thailand. These highlight the critical issues and concerns in natural resource management with focus on agro-biodiversity conservation, its sustainable use and management, regional efforts and concerns in integrated natural resource management for sustainable production; strengthening information and communication technology and on in-depth analysis of the Vision document for strategies to be stressed/prioritized for developing an action-plan addressing various issues. It has to address the emerging concerns on strengthening regional collaboration and partnership, policy advocacy, human resource development, publication enhancement and dissemination, and promoting overall public awareness among NARS towards improvement in strategic thinking. APAARI is targeting to develop such an action plan and is working on the modalities of its operation to accelerate ARD Programmes in the Asia-Pacific region addressing to resource conservation, poverty alleviation and agricultural and environmental sustainability.

APAARI is grateful to the Australian Centre for International Agricultural Research (ACIAR), International Service for National Agricultural Research (ISNAR) and Global Forum on Agricultural Research (GFAR) for their financial support to organise this meeting, and to the Department of Agriculture, Govt. of Thailand for hosting this meeting at Chiang Rai. We are also thankful to all the members, associate members and other participants for their valuable suggestions during the course of this successful meeting.



(R.S. PARODA)  
*Executive Secretary*  
APAARI



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## LIST OF ACRONYMS

ACIAR	Australian Centre for International Agricultural Research
AFITA	Asia Federation for Information Technology in Agriculture
AGRIS	Agricultural Research Information System
AIT	Asian Institute of Technology
APAFRI	Asia-Pacific Association of Forestry Research Institutions
APAN	Asia-Pacific Advanced Network
APARIS	Asia-Pacific Agricultural Research Information System
APO	Associate Professional Officer
APRAIS	Asia-Pacific Regional Agricultural Information System (Renamed APARIS, see APARIS)
APSA	The Asia and Pacific Seed Association
ARD	Agricultural Research for Development
AREEO	Agricultural Research Education and Extension Organisation (Iran)
ASEAN	Association of Southeast Asian Nations
AVRDC	Asian Vegetable Research and Development Centre
BARC	Bangladesh Agricultural Research Council
CABI	Centre for Agricultural Bioscience International
CARP	Sri Lankan Council for Agricultural Research Policy
CBD	Convention on Biological Diversity
CEWRE	Centre of Excellence in Water Resources Engineering
CGIAR	Consultative Group on International Agricultural Research
CIMMYT	International Maize and Wheat Improvement Centre
CIRAD	Centre de Coopération Internationale en Recherche Agronomique pour le Développement
CLAN	Cereals and Legumes Asia Network
COA	Council of Agriculture (Taiwan)
COGENT	Coconut Genetic Resources Network
CORRA	Council for Partnership on Rice Research in Asia
DOA	Department of Agriculture (Thailand)
FAO	Food and Agriculture Organization of the United Nations
FAO-RAP	FAO Regional Office for Asia and the Pacific
GFAR	Global Forum on Agricultural Research
GIS	Geographic Information System
GoFAR	Group on Fisheries and Aquaculture Research
GPA	Global Plan of Action
GRFA	Genetic Resources for Food and Agriculture
GRM	Genetic Resources Management
GRP	Genetic Resources Policy
HRD	Human Resource Development
IARC	International Agricultural Research Centre
IBSRAM	International Board for Soil Research and Management
ICAR	Indian Council of Agricultural Research
ICARDA	International Centre for Agricultural Research in the Dry Areas
ICIMOD	International Centre for Integrated Mountain Development
ICLARM	International Centre for Living Aquatic Resources Management
ICRISAT	International Crops Research Institute for the Semi-arid Tropics
ICT	Information and Communication Technology
ICUC	International Centre on Underutilized Crops

ICW	International Centres Week
IFAD	International Fund for Agricultural Development
ILRI	International Livestock Research Institute
INGER	International Network for Genetic Evaluation of Rice
INP	Information Nodal Point
INRM	Integrated Natural Resources Management
IPGRI	International Plant Genetic Resources Institute
IPGRI-APO	IPGRI Office for Asia, the Pacific and Oceania
IPM	Integrated Pest Management
IPR	Intellectual Property Rights
IRRI	International Rice Research Institute
IUFRO	International Union of Forestry Research Organizations
IWMI	International Water Management Institute
JIRCAS	Japan International Research Centre for Agricultural Sciences
KISS	Knowledge and Information Systems Networking Proposal
KRS	Koronivia Research Station (Fiji)
MAFFM	Ministry of Agriculture, Forests, Fisheries and Meteorology (Western Samoa)
MARD	Ministry of Agriculture and Rural Development (Vietnam)
MARDI	Malaysian Agricultural Research and Development Institute
MLS	Multilateral Systems
MTM	Mid Term Meeting
NACA	Network of Aquaculture Centres in Asia-Pacific
NARC	Nepal Agricultural Research Council
NARI	National Agricultural Research Institute (Papua New Guinea)
NARS	National Agricultural Research Systems
NARS-SC	Secretariat of the NARS Steering Committee/GFAR
NGO	Non-Governmental Organization
NRM	Natural Resource Management
PARC	Pakistan Agricultural Research Council
PCCARD	Philippine Council for Agriculture, Forestry and Natural Resources Research and Development
PGR	Plant Genetic Resources
PVP	Plant Variety Protection
R&D	Research and Development
RAIS	Regional Agricultural Information System
RCT	Resource Conservation Technologies
RDA	Rural Development Administration (Republic of Korea)
RWC	Rice-Wheat Consortium
SAARC	South Asian Association of Regional Cooperation
SAIC	South Asian Information Centre
SINGER	CGIAR System-wide Information Network for Genetic Resources
SPC	South Pacific Commission
SSNM	Site-Specific Nutrient Management
TAC	Technical Advisory Committee of the CGIAR
TAMNET	Tropical Asian Maize Network
TRIPS	Trade-related Intellectual Property Rights
UTFANET	Underutilized Tropical Fruits Asia Network
UTVAPNET	Underutilized Traditional Vegetables Asia and the Pacific Network
WAICENT	World Agricultural Information Centre
WANA	Western Asia and North Africa

## INAUGURAL SESSION

The Sixth General Assembly of APAARI and the Expert Consultation on Strategies for Implementing APAARI Vision 2025: Strengthening Agricultural Research for Development in the Asia-Pacific Region was held at Chiang Rai, Thailand, from 8-10 November 2000. The programme is given in Annexure-I. The Assembly was hosted by the Department of Agriculture, Government of Thailand. The meeting was inaugurated by His Excellency Governor of Chiang Rai and Dr R.B. Singh, Assistant Director General and Regional Representative FAO-RAP Bangkok, was the Guest of Honour. Over forty participants attended the meeting. They represented APAARI member-NARS from Australia, Fiji, India, Iran, Japan, Republic of Korea, Nepal, Papua New Guinea, Pakistan, Philippines, Sri Lanka, Taiwan, Thailand, Vietnam and Western Samoa. APAARI associate members were represented from ICRISAT, CIMMYT, ICARDA, IRRI, IPGRI, ICLARM, IWMI, ILRI; a number of other regional and international centres such as ISNAR, AIT, AVRDC, CABI, ICIMOD, ICUC; and networks like CLAN, GoFAR, NACA, RWC, TAMNET, CORRA.

At the outset, the Governor of Chiang Rai, welcomed all the participants. He appreciated the importance of the meeting and expressed the hope that all participants would contribute to fruitful outcome of the deliberations.

Mr N. Senanarong, Deputy Director General, Department of Agriculture, Thailand, welcomed all the NARS leaders and the dignitaries from the various international research organizations. Referring to the World Food Summit in 1997, he mentioned that priority areas should include sustainable and remunerative farming systems for poor farmers; enhancing the income and living standards of rural women; sustainable management of agriculture and natural resources; enhancing the capacity of national research systems, enhancing the productivity of agriculture, and public policy and socio-economic research. He pointed to the dire need to preserve traditional varieties, adopt integrated pest management, focus on rainfed farming, develop low input technologies, and to the need to address women in development issues. He stressed on the need for such regional meetings to ensure that Agricultural Research and Development in the Asia-Pacific is effectively promoted and facilitated through the novel partnerships among NARS and other related organizations.

Dr R.S. Paroda, Executive Secretary of APAARI in his welcome address highlighted the role of APAARI as an apolitical, neutral forum in the Asia-Pacific region, to promote and coordinate agricultural research for development focussing on the needs of NARS. He briefly reported on the achievements made by APAARI during the past ten years. Dr Paroda on behalf of APAARI, conveyed gratitude to Dr R.B. Singh, the Guest of Honour and Dr Ananta Dalodom for hosting the meeting at Chiang Rai. He also thanked all the members, associate members and all participants for making it possible to attend the meeting. He specially welcomed representatives from Vietnam and Taiwan, ILRI and ICIMOD being represented in the meeting for the first time as also representatives from AIT and IWMI. He also pointed to the developing links, coordination with SAARC, SPC, ASEAN and other sub-regional bodies. He referred to last year's meeting, wherein headway was made to finalise APAARI Vision 2025. The current task is to set strategic directions for implementing activities contributing to attaining the vision goals and objectives. He apprised the participants on the deliberations of the first ICT Expert Consultation preceding this meeting on 6-7 November, and pointed to the constructive outcome and the follow-up required by the member NARS *vis-à-vis* APAARI and other

partners. He pointed to the recent policies in the CGIAR to collaborate with regional fora and work in partnerships.

Dr Ian Bevege, Chairman APAARI, in his inaugural address, expressed concern on the implementation of APAARI Vision 2025 and the role of APAARI *vis-à-vis* NARS and other partners. He appreciated the progress achieved and, in particular, the strategy being developed for promoting information communication networking.

Dr R.B. Singh referred to the agricultural advancement and the role of new sciences, new technologies and globalization, and the unholy alliance of food insecurity, poverty and environmental degradation. In this context, he referred to the United Nations Millenium Summit 2000 which has highlighted all these problems. He appreciated the role of global and regional fora, including APAARI and efforts put forth in preparing APAARI Vision 2025. He emphasized that APAARI must improve the NARS capacity for decision making and priority setting, and must play a role in agricultural research and technology development policies. FAO considers APAARI as the most vibrant regional forum and he reassured that FAO would be pleased to support/promote APAARI in its activities.

Dr Ananta Dalodom, Vice-Chairman APAARI and Director General, Department of Agriculture, and Chief Guest at the inaugural function referred to the rapid agricultural growth in Asia-Pacific region during the last three decades, prevailing regional disparities, increase in population and concern for poverty alleviation. He stressed the need to maintain balance between agricultural growth, poverty reduction and environmental protection as also to strengthen rural development institutions to implement policy reforms and investments. Referring to future challenges to meet massive population pressure, he pin-pointed to increased food production, and the need to solve the problems of surplus food and poverty through bio-revolution technology. He referred to constraints such as water scarcity and quality, land degradation, shortage of operating funds and trained manpower. He also stressed on increased private sector involvement in agricultural research, participatory role of diverse stakeholders from public/private sectors, NGOs, Farmers' organizations, need for rapid development of information technology, and emphasis on research in resource-poor rainfed and other unfavourable areas to address rural development.

Four new publications were released during the Inaugural Session by the Governor of Chiang Rai and Dr Dalodom:

- APAARI Vision 2025 – Agricultural Research for Development,
- APAARI – a Decade of Progress,
- Bivalve Mariculture in India – A Success Story, and
- Plant Genetic Resources Conservation and Utilization in the Asia-Pacific Region.

Mr P.K. Saha, Plant Protection Officer, FAO-RAP proposed a vote of thanks on behalf of APAARI.

## **EXPERT CONSULTATION ON STRATEGIES FOR IMPLEMENTING APAARI VISION 2025: STRENGTHENING AGRICULTURAL RESEARCH FOR DEVELOPMENT IN THE ASIA-PACIFIC REGION**

The deliberations of the Expert Consultation were conducted in four Technical Sessions. Session-I dealt with Natural Resource Management, and focused on agro-biodiversity conservation, sustainable use and management; Session-II dealt with Integrated Natural Resource Management for Sustainable Production and highlighted on regional efforts and concerns, with focus on case studies of research carried out in this field by different IARCs, International Organizations in collaboration with national partners/NARS; Session-III stressed on Strengthening Information and Communication Technology and discussed mainly the outcome of the two-day meeting on ICT preceding this consultation, involving national, regional and international partners; Session-IV on APAARI Vision 2025, was mainly a round table discussion with concern on developing an Action Plan. The Plenary Session was chaired by Dr R.S. Paroda, Executive Secretary, APAARI, wherein specific recommendations were endorsed by the participants. Deliberations of each session are summarised below.

### **TECHNICAL SESSION I: NATURAL RESOURCE MANAGEMENT: OPPORTUNITIES AND CHALLENGES – AGRO-BIODIVERSITY CONSERVATION, SUSTAINABLE USE AND MANAGEMENT**

Session Chair: Dr R.B. Singh

The focus of this session was on safeguarding genetic resources diversity. The Chairman stressed on the overall concerns on agro-biodiversity conservation and utilization, its sustainability and management.

Dr Fernando Chaparro presented a paper on key issues and partnership proposals in view of the "GFAR Initiative on Genetic Resources for Food and Agriculture", carried out in partnership with FAO and IPGRI/CGIAR with involvement of all stakeholders through Regional Fora. The objectives are to facilitate exchange of experiences among NARS on Genetic Resources Policy (GRP), identify policy options for national legislation, allow for a MLS for access and benefit sharing, build institutional capacity and awareness and to promote global/regional partnerships. Activities include: Regional Workshops to address Dresden Declaration on Plant Genetic Resources Management and national legislation preparedness highlighting key policy issues – 10 micro-papers were prepared, the Dresden Declaration on Plant Genetic Resources for Food and Agriculture was finalized besides different partnership proposals. Follow-up to Dresden will be given in a book being published by GFAR and IPGRI which includes the micro-papers. These micro-papers were prepared on the following policy issues: CBD-Compliance, National access to legislation; Policy options for IPR legislation; Benefits of MLS; Germplasm; Country of origin; Policy making; Partnerships to implement the Global Plan of Action (GPA); A multilateral system for the exchange of germplasm. Major concerns related to Sovereign Rights, Benefit Sharing and Biosafety issues and encourage countries for enacting legislation. For an update on this, Crucible II publication will be made available to APAARI members. Also the papers of ICW 2000 meeting will be circulated.

Dr Percy E. Sajise, Regional Director of IPGRI-APO in his presentation on "Strengthening Regional Collaboration in Plant Genetic Resources Activities", apprised the participants on the current status

and gave an assessment of regional collaborations through networking. He pointed out that there are 5 regional and 16 crops and forest species networks on PGR. These networks suffered from inadequate funding, lack of commitment, sharing of germplasm, and coordination. Also an interface is needed between global and regional networks. He expressed concern that only a few are sustainable and functional networks. There was a need for a Pan-Regional PGR Network under the umbrella of APAARI to be established with the commitment of all partners. He stressed on the need to create such networks which are truly functional. He specifically pointed out to develop more effective resource generation strategies for regional networks, mechanisms to promote more exchange of information, technology and germplasm on mutually agreed terms and conditions, and develop a regional monitoring and evaluation system for assessing periodically the status of networks. It was felt that APAARI makes available information on useful genetic resources in partnership with IPGRI. There was a regional need to develop the mechanisms for benefit sharing.

Another key-presentation was made by Dr R.S. Paroda on "Strengthening PGR Programmes and Policies at National Level", in which the Indian NARS was taken as a case-study. He dealt with organisational issues regarding germplasm registration and exchange, conservation efforts and activities of the National Genebank. He also highlighted the National Action Plan that covered biodiversity appraisal, information networking, community gene fund, equitable sharing/Prior Informed Consent, Material Transfer Agreement, Public Awareness Campaign. He stressed on the need to move from NARI to NARS and highlighted on some priority PGR activities such as; enhancing *ex situ* conservation by various methods, establishing a national database on PGR, HRD and training needs, and building up on shared experiences. Also due attention is to be given to legal aspects of PGR with regard to IPR. He then focused on the global inter-dependence on GRFA which calls for international cooperation in harmonising inter-governmental agreements and conventions and the role of global and regional fora as facilitators. The APAARI Vision highlights that NARS are to be fully autonomous, efficient, effective, caring and financially sustainable in achieving the organizational goals of household food and nutritional security, economic welfare and sustainable use of available natural resources. In this context, the National PGR Programmes for Food and Agriculture should be developed and strengthened within the NARS with considerable working autonomy and regulatory authority, wider representation, collaboration and international cooperation.

The concerns expressed in these presentations were discussed with focus on agro-biodiversity conservation/management and related issues. Dr R.B. Singh ensured full support of FAO-RAP for such regional initiatives. Dr K.A. Malik, Pakistan, stressed the need for a mechanism that includes all the players. Dr S. Kumar, Fiji, mentioned that Fiji lacks capacity for database development and that no information exists for many crops presently grown. He strongly felt the need for well developed NARS to help smaller NARS in their capacity building. Dr Ian Bevege, Australia, referred to two workshops recently held in the Pacific, dealing with agro-biodiversity related concerns. Dr D. Joshy, Nepal, wanted special attention to be given to the highlands agro-ecosystems. Dr M.C. Saxena, ICARDA, suggested that APAARI could organize a meeting to address issues of biosafety regulations.

Dr Sajise responded to suggestion from Fiji by informing that IPGRI is planning to set up PGR network in South Pacific region, and a consultation meeting will be held. Human Resource Development in South Pacific Countries can be taken up in partnership with APAARI. With reference to Nepal, he said that strengths could be shared, like in the *in situ* conservation Programme wherein IPGRI is collaborating in Nepal. Dr Fitzhugh, ILRI laid emphasis on *in situ* conservation for Animal Genetic Resources. The participants also felt the need through APAARI for catalyzing policy makers to support genetic resources management in collaboration with GFAR, FAO, IPGRI and other concerned organizations.

The two Working Groups further deliberated on agro-biodiversity issues including IPR, sharing of genetic resources etc. and their brief reports are given:

### **WORKING GROUP I: STRATEGIES FOR AGRO-BIODIVERSITY CONSERVATION AND MANAGEMENT IN THE ASIA-PACIFIC REGION**

Facilitator: Dr C. Hoogendoorn, IPGRI

The group felt that the importance of the issue and the magnitude of the subject made a general discussion very difficult. Therefore, four issues were identified as being of major importance for strategy development and further discussed: Demarcation of Agro-biodiversity for the Region; Capacity Building; Public Awareness; the Role of Regional Networks. The following suggestions/recommendations were made:

#### **Demarcation of Agro-biodiversity for the Region**

- Agro-biodiversity for conservation in the region should be comprised of plants (crops and trees), animals (both livestock and fish), and microbes important for the food chain and agriculture in general.
- Within these groups, priorities for species for conservation should primarily be determined nationally. Special consideration should also be given to the neglected and underutilized plants and animals. However, economy of scale efficiencies by combining efforts at the regional and sub-regional scale should be considered.
- Within the general biodiversity action plans (CBD), national action plans for agro-biodiversity conservation should be developed with high priority.
- For reasons of urgency, a commodity or end-use approach (microbes) to conservation has preference over an ecosystem approach. Depending on the commodity either an *ex situ* or an *in situ* conservation strategy will be more efficient and cost effective.
- For information sharing about accessions and collections, the use of a common communication system is advocated. For this purpose SINGER, a System-wide Information Network for Genetic Resources developed by the CGIAR, might be considered.

#### **Capacity Building**

- There is a great need for technical training amongst the NARS. Added value can be obtained by making use of APAARI partnerships.
- There is both a need to stimulate and make use of existing post-graduate level university courses for future genetic resources scientists and short-term specialized courses for curators and other genetic resources specialists already on the job.

#### **Public Awareness**

- Agro-biodiversity conservation in the region suffers from lack of funding. It is imperative to increase awareness with decision makers and society in general (electorate) to be able to increase financial resources.
- Regional ministerial conferences could be preceded by workshops on agro-biodiversity conservation, to be organized by FAO, IPGRI, GFAR and APAARI *et al.*
- The turnover of Ministers (Agriculture, Environment, Forestry, Natural Resources) in the region is rather high. Therefore also, DGs of the countries should be targeted at the regional and national level.
- At the national level public awareness should be raised among the senior research managers and grass root organizations and NGOs.

- Awareness of the importance of agro-biodiversity conservation should be created, via the Ministry of Education, at the levels of primary and secondary school education (the electorate and scientists of the future).
- Capacity building is urgently needed with the NARS for developing materials and strategies to increase public awareness.

### **The Role of PGR-Networks**

- At present, there are regional plant genetic resources networks and a fish network (GoFAR). It should be considered to set up regional networks for livestock and microbes genetic resources as well.
- Both national and regional networks should also include grass root organisations and NGOs.
- The recommendations proposed by Dr P. Sajise and Dr P. Batugal (IPGRI) in their paper 'Strengthening Regional Collaboration in Plant Genetic Resources Activities' are to be endorsed, and are quite valid for future regional networks for agro-biodiversity conservation in general.

### **WORKING GROUP II: IPR AND SHARING OF GENETIC RESOURCES**

Facilitator: Dr R.P. Cantrell, IRRI

The issues discussed and concerns expressed related to the following:

1. Conservation, management, and exchange of genetic resources, including plants, animals, aquaculture, and microorganisms, are critical for the continued improvement of plant and animal species used in food and agriculture.
2. There are numerous examples of successful programmes/projects/networks that have successfully facilitated the exchange of genetic resources. International Network for Genetic Evaluation of Rice (INGER), International Network for Genetics in Aquaculture (INGA), and Coconut Genetic Resources Network (COGENT) are just a few examples that were mentioned.
3. There is a new and probably irreversible environment in most of the member countries concerning the ownership and access to genetic resources. The major factors contributing to this new environment are: increased role of the private sector in providing agricultural technologies, TRIPS requirement for protection of genetic resources, and the Convention on Biological Diversity (CBD).
4. Senior researchers and policy makers in many countries lack adequate information and experience to deal with the complexities of the new legal environment involving genetic resources.
5. The public institutions in many of the countries have begun to protect the technologies developed by their scientists and use licensing as a way to stimulate the growth of the private sector and also generate revenue.
6. Compared to plants, animal genetic resources including aquatic animals, pose some very unique challenges to comply with the requirements of CBD and the TRIPS agreement, *i.e.* the difficulty of establishing sovereign ownership for indigenous landraces which routinely move across national borders.
7. Many countries have a real dilemma in the use of genetic resources for the commercial sector and the need for development of public goods for the poor subsistence farmers that cannot pay for inputs. There is probably a need to have different strategies and approaches for commercial and internationally traded commodities and those grown by subsistence farmers.
8. There are numerous countries that have already experienced the change from few protection measures for IP of genetic resources to highly developed PVP and patent environments.
9. The Central Advisory Service of the CGIAR is concerned and hopes to be able to provide information and training to NARS in the area of IP protection and licensing.



The group discussion resulted in the following specific suggestions/recommendations:

- Since all member countries need information and training in the area of intellectual property protection of genetic resources, it was recommended that APAARI sponsors an expert consultation in the near future on this topic.
- Prior to this meeting, a task force should be appointed by APAARI to conduct an electronic conference to survey the member countries and assess the status of legislation and practices so that the priority issues can be addressed in the consultation.
- The proposed consultation should promote the sharing of member country experiences and bring experts to provide training.
- IPGRI and GFAR have much to offer in the planning and execution of this proposed consultation.

Thus, APAARI needs to coordinate/plan its future activities accordingly.

## **TECHNICAL SESSION II: INTEGRATED NATURAL RESOURCE MANAGEMENT FOR SUSTAINABLE PRODUCTION: REGIONAL EFFORTS AND CONCERNS – OPPORTUNITIES AND CHALLENGES**

Session Chair: Dr K.A. Malik

Seven key presentations were made in this session, four on crop-based agro-ecosystems, one each specially on water resources management, mountain ecosystems and the role of livestock.

Dr William D. Dar, Director General, ICRISAT presented a paper on "Integrated Natural Resource Management in SAT in Asia". He referred to prevalent constraints to sustainable production in the Asian Semi-Arid Tropical (SAT) regions such as water shortage, low soil fertility and lack of integrated approach, while highlighting successes achieved through green revolution in crop production. He said that rainfall harvesting and management was one of the major issues. He emphasized on water-based strategy such as community-scale watersheds and need for crop diversification with legumes in rice fallows such as in parts of India, Bangladesh, Nepal and Pakistan. He pointed to joint collaboration of APAARI and ICRISAT in INRM through Information Sharing, Technology Transfer and Policy Advocacy. He laid emphasis on ICRISAT's role in INRM in Asia in sharing its advantages with partners as a bridge, broker and a catalyst such as in soil/water/nutrient management, GIS systems, Community Development models.

Dr R.P. Cantrell, Director General, IRRI made a presentation on "IRRI's Perspective on INRM for Sustainable Production". He pointed to CGIAR's concern on INRM and the recently organized workshop in August 2000 at Penang, Malaysia. He referred to rice production as a special process and its INRM as a global issue, the problems of INRM in lowland and rainfed rice, notion of systems integration/farming systems research, concern on global warming and management practices, role of new technologies, site-specific nutrient management (SSNM), land levelling technologies, leaf colour chart, a simple farmer tool to determine the timing of nitrogen topdressing in rice. Dr Cantrell pointed to IRRI's medium term plan (MTM) which has seven of the 12 projects dealing with NRM. He referred to the water crisis affecting the farmers and developing drought-tolerant and water-efficient germplasm. He pointed to IRRI's INRM Eco-regional Initiatives, achievements of the RWC for the Indo-Gangetic Plains, work in Red River Basin of Vietnam and the wide array of partners involved in collaboration in such joint R&D initiatives with NARS, NGOs, other regional and international organizations. He stressed on building of effective partnerships among national and international institutions for the overall success and sustainability of the INRM research activities.

Dr R. Barker, Special Adviser, IWMI, in his presentation "Towards Integrated Water Resources Management", apprised on IWMI's research agenda which focused on the river basin and system level research. The new Strategic Plan being developed includes both water and land resources

management; increased attention to groundwater management, and further development of the environment component. He also addressed to IWMI's concern on policy, institutional and management problems *vis-à-vis* interaction with NARS. He briefly dealt with the five different research themes: Integrated water resource management for agriculture; Sustainable smallholder land and water management systems; Sustainable groundwater management; Water resource institutions and policies; Water, health and environment. Though the region faces water scarcity problem, 60% of the irrigated water lies in Asia, and 40% of this is in India and China.

Dr M.C. Saxena, Assistant Director General, ICARDA, dealt with "INRM Strategy for the Dry Areas". He pointed to CGIAR's INRM targets to improved human welfare through enhanced system sustainability and increased productivity. The strategy includes problem analysis, system analysis, site selection, solution development and adoption. He referred to constraints such as population growth, poverty, limited resources, low productivity and diversification, and INRM problems of water and its quality, soil and organic matter depletion and management of biodiversity in rangelands, crops and small ruminants. He briefly dealt with the research management strategy in dry areas such as crop-livestock-range systems, rainfed cropping systems, conjunctive water-use systems, fully irrigated systems, and peri-urban systems, in the context of work carried out by ICARDA. For R&D efforts, participatory research on specific sites is quite critical.

Dr R.K. Gupta, CIMMYT, briefed on "Resource Conservation Technologies for Enhancing Rice-Wheat System Productivity in the Indo-Gangetic Plains - Activities of the RWC". The Rice-Wheat Consortium (RWC) with CIMMYT as the convening centre has raised awareness of the importance of the INRM with production research. It has enhanced the productivity and sustainability of the rice-wheat systems. He also referred to recent emphasis to address location specific problems, practicing resource conservation technologies on zero-tillage, reduced tillage, seeding, bed-planting and associated agro-economic practices. New initiatives in farmers fields have led to the adoption of zero-tillage technologies in more than 2,000 ha in India and Pakistan, bed-planting in combination with laser land-leveling that saves about 50% of the irrigation water and improved productivity was practiced by farmers in Pakistan and north-western India. RWC is a good example of a most innovative partnership model in South Asia in APAARI that needs to be duplicated/adopted in other regions.

Dr Hank Fitzhugh, Director General, ILRI presented recent activities of the institute. He pointed to the importance of livestock which provides much more value than cereals, and that meat demand in China and India will double in 20 years. Milk likewise will have 3-times increased demand by 2020. Feed-grain requirement will also double likewise. He stressed on several areas of collaboration: (i) Livestock genetics and genomics; (ii) People, livestock and environment; (iii) System-wide livestock programme; and (iv) Production to consumption systems.

Dr J. Gabriel Campbell, Director General, ICIMOD presented a paper on "Opportunities and Challenges of Natural Resource Management in the Hindu Kush Himalayas (HKH)". The region includes Afghanistan, Bangladesh, Bhutan, China, India, Myanmar, Nepal and Pakistan. It faces problems of poverty, resource degradation, lack of appropriate research and investment and low productivity. He referred to mountain specific problems of inaccessibility, vulnerability and marginality in the highly diverse opportunities to exploit rich diversity and local knowledge. Emphasis is on ecoregional development directed on programmes leading to poverty reduction and sustainable livelihoods of mountain households, sustainable management of the mountains, rangelands, water, forests, soil. Dr Campbell expressed concerns on capacity building of mountain institutions such as in GIS, documentation, information and communication and outreach, emphasis on participation, communication with farmers, NGOs and policy makers. ICIMOD for this matter including public awareness produces 45 publications and 4 video films per year. It was stressed that ICIMOD/Global Mountain Forum seek stronger linkages with APAARI and sister institutions in the region.

These presentations were discussed in wider context of management of natural resources, with emphasis on INRM. Dr Paroda stressed that water has become a major issue. The integrated approach is not yet in place. Nevertheless, the Rice-Wheat-Consortium is there as a starter and it is a NARS led initiative. Dr Malik urged to start similar initiatives in other ecologies. Dr Rafael D. Guerrero, GoFAR, mentioned the integrated rice-fish farming as a good model that could be replicated suitably by member-NARS. Dr Barker, IWMI, remarked that IWMI decided to have some benchmark water basins. He suggested to select 6-12 basins where people are already working. Dr Bevege expressed satisfaction with the basin approach launched by IWMI. He also laid emphasis on an eco-regional approach. Working with basins makes sense on the Archipelago where a number of small but important basins are found. Two workshops have been organized. In the livestock sectors, he felt the need to consider small ruminants like goats and sheep. There was scope of improving the quality of crop residues for livestock production. Dr William D. Dar, ICRISAT, mentioned that legumes and other crops will soon be brought into the production systems. In the Mekong delta, there is some scope for integrating agriculture-fisheries-forestry where APAARI, NARS and CG-Centres can cooperate. Dr D. Joshy, Nepal, mentioned that the capacity of the NARS should be considered in totality including Human Resources and the Institutional Capacity. Dr G. Singh, AIT, mentioned that AIT/APAARI could collaborate in system approaches, integrated approaches like integrated coastal zone management, livestock management and integrated watershed development, in HRD. Dr Paroda suggested for a Watershed Management approach in partnership with NARS that could involve WANA region, SAT region and ICIMOD. He also favoured incorporation of legumes, the role of which was also emphasised in the earlier meeting in Korea. Soybean and mungbean were also identified for this purpose. He stressed that the focus should also be on knowledge sharing rather than on information sharing in such integrated efforts. Dr Saxena, ICARDA, referred to the research efforts at ICARDA on the role of lentil in Rice Systems. Furthermore, options with saline water and salt tolerant crops could also be explored.

Dr Cantrell drew attention on the issue of climate change as it relates to agricultural production. Dr Fitzhugh, ILRI, referred to the recent meeting in Penang where there was a clear recognition of the importance of agriculture when it relates to environment and climate change. In this regard, the focus should be more on the river basins. We should be bringing in Carp revenues into macro-economics, including crops such as sweet potato and also swine production. Disaggregated breeding herds of ruminants in the drier areas, and also in areas where feed supply is not enough for buffaloes should get due attention. Goats have truly an advantage in stress situations.

Dr Friedrichsen, AVRDC, mentioned mungbean as a potential crop that needs to be looked at. He also referred to a joint proposal that was submitted to IFAD. Dr Malik replied that mungbean was promoted by the NARS. He asked not to lay emphasis on donor-reliance but to initiate suitable action, as per NARS needs by the NARS themselves. "Farmers are intelligent. If choices are offered to them, they will make the right decision", he stated.

Dr R.B. Singh recalled that in 1991, in a joint meeting with CGIAR/TAC/APAARI, it was observed that the contribution of the CG-system to this region was low. It led to placement of staff in ICRISAT. He also pointed out that the population of water buffaloes had reduced from 5 million to 1.5 million in Thailand in the past 10 years. However, we need to address concerns such as on the shrinking water buffalo population and conservation and sustainability of agro-ecosystems through integrated resource management. Dr Paroda stressed that it was now time to follow up on issues like NRM, GRM and also ICT. Networks and partnerships are essential to accomplish this. Global level developments do have impact on the region and affect the regional programme and also our vision while implementing our activities in which we try to put our vision into practice. The house also felt the need for sharing of information and capacity building within NARS.

Dr Dar stated that INRM is crucial for enhancement of second green revolution considering its role particularly, in dry areas. Sustainable indicators have been introduced; indicators on resource use efficiency to assess technical, environmental and social interactions. He also pointed out that Rice-Wheat system could be further enhanced suitably with more collaborative efforts, inviting more partners/NARS.

### **WORKING GROUP III: FUTURE STRATEGIES IN INRM IN ASIA-PACIFIC REGION**

Facilitator: Dr William D. Dar

Integrated natural resources management (INRM) is very critical to the future of agriculture, forestry, and fisheries in the Asia-Pacific region. The group discussed APAARI-NARS-IARCs partnerships in INRM. IARCs have a major role to play in INRM with the NARS partners to ensure that the needed basic, holistic research and methodologies are elucidated. However, the major responsibility for execution of INRM is of the NARS. APAARI has a facilitating and coordinating role in this IARC-NARS partnership in INRM research, based on framework developed by CGIAR Centres in Penang meeting. Each IARC has certain comparative advantages, but will benefit from synergies arising from collaboration. A systems approach to encompass farmers, institutions and agro-ecosystems is crucial to the success of INRM. Economic benefits to farmers and pastoralists should not be overlooked while considering the sustainability of the ecosystems. It is essential to also realize the long term sustainability of the synergies to be harmonized with germplasm improvement strategies.

#### **Critical Issues**

**Importance of water:** Water management is crucial to the future of agriculture. The role in regional perspective was discussed at different levels: River basin level (e.g. Mekong river, Red river delta area, etc.); Systems level [Rice-Wheat Consortium for Indo-Gangetic Plains (RWC), Hindu Kush Himalayas, (Rice-fish integration etc.)]; Watershed level; Community level; and Farm level. The issues involved in water management are: Integrated water and land resource management for agriculture, fisheries and forestry; Sustainable groundwater and surface water management; Water resource institutions and policies; Water in health and environment; Use of marginal quality water; Enhanced germplasm with high water use efficiency.

**Arresting soil degradation and desertification:** Concern was expressed on soil conservation using available technologies; reducing desertification; and reducing salinization.

**Integrated nutrient management:** The group focus was on the use of agricultural residues to improve soil organic matter, and for integrated systems (livestock, aquaculture, etc.) and incorporation of legumes in cropping systems for sustainability of soil fertility.

**Integrated pest management:** Focus was on the reduction of dependence on chemicals, and more use of biological pesticides and biological control agents. A systems approach to pest management, including integration with fish-rice systems, was favoured.

**Resource conservation technologies:** Based on existing R&D efforts, emphasis was given to zero tillage technologies like timely seeding of crops with zero-tillage, reduced tillage, surface seeding, and mechanization and crop residue management as an alternative to residues with starter N dose. Also Resource Conservation Technologies (RCT) were identified for Pilot testing. Among them are: Laser land levelling; On-farm water storage on medium and large farms; Direct seeded rice in unpuddled conditions; Wet Seeded Rice (WSR) in puddled soils, and weed management; and Diversification of Rice-Wheat system with potato, legumes, maize and vegetables in bed planting system. Additionally, participatory research needs were identified. One could think of: Surface decomposition of residues for nutrient recycling and avoid burning, SOC build-up, and complementing engineering solutions

to seeding in loose residues and promotion of bio-control agents for disease management (develop a Multi-agent system); Crop- rangeland-livestock integration to reduce rangeland degradation.

*Impact of climatic change on agriculture:* Reference was made to: The role of rangeland conservation; Management and rehabilitation; Carbon sequestration by forests and rangelands; Research to mitigate environmental degradation, etc.

*Enlarge the food basket by enhanced utilization of under-exploited crops:* Focus should be on commodity groups such as fruits, cereals and legumes.

### **TECHNICAL SESSION III: STRENGTHENING INFORMATION AND COMMUNICATION TECHNOLOGY**

Session Chair: Dr Stein W. Bie, ISNAR

Ms J. Achara, IT Manager APAARI, and Dr Ian Bevege, Chairman of APAARI, reported on the ICT Expert Consultation that was held prior on 6-7 November 2000, on the Establishment of an Asia-Pacific Agricultural Research Information System (APARIS). The brief report is attached in Appendix-1 and the separate proceedings of this consultation are also being made available.

The round table discussion followed after the members/participants were briefed on the diverse aspects of the ICT framework. Dr Paroda emphasized for continued support to the current mode of publishing as a priority as the ICT infrastructure in many NARS does not allow sole digital distribution of materials. As Executive Secretary, he reported on the support through the Global Forum regarding the RAIS establishment, but continued that while building the system we should focus on current resources. Continued IT support to APAARI is uncertain. APAARI should ascertain funding support through a support group for establishing APARIS to ensure sustainability. Dr Paroda pleaded for upgrading NARS homepages and providing need based support to the National Systems. Further activities need to focus on preparing directories (directory of scientists). National nodal points have already been identified and a system is in place; from KISS to APRAIS to APARIS. Other regional organizations need to be involved as well like APAN, AFITA, SAIC, ASEAN, SAARC, SPC, etc. Dr Malik saw possibilities to subscribe to journals more cost effectively using ICT to share subscriptions within the NARS.

Dr Ghodake, emphasised on priority setting. Cost effectiveness is important particularly for small NARS. Dr Fernando Chaparro, GFAR, remarked that reaching to farmers as yet, remains a high priority. Dr Rudgard, FAO-WAICENT, reported on the ICT Expert Consultation that was held in June 2000 where 88 countries had sent delegations. The regional fora are very important for WAICENT as they have to cover 180 countries with a few number of staff in WAICENT outreach programme. A major upgrade of AGRIS is planned. He pointed out that the CG has already electronic fora. Dr R.B. Singh, FAO-RAP, stressed that APAARI is very important for FAO. He expressed concern on support to activities and said that on budgetting FAO-RAP may re-consider backstopping. The sustainability of APAARI needs a full time Executive Secretary. Dr Fitzugh stressed that the initiative proposed/projected should be regionally utilized. If the use of the system to researchers is limited then the interest of the national governments and donors is lost. It should be made very clear how this could contribute to Agricultural Research for Development.

Dr Stein Bie, ISNAR and chairman of the session, noticed a very strong movement among the CG centres to get their info-resources into the NARS. He noticed a considerable depth in the activities undertaken and proposed, and ambition to move forward. The session revealed that some small (especially Pacific) NARS need special attention. There are major international activities to which APAARI should link more firmly. There is also a major interest in ensuring that APAARI secretariat is capable to manage the interface to national/international developments. This field desires funding from donors or even private sector. Both financial support and additional staffing are essential.

## TECHNICAL SESSION IV: APAARI VISION 2025

Session Chair: Dr Fernando Chaparro, GFAR

Dr Fernando Chaparro in a brief presentation provided the background and synthesis of the APAARI Vision 2025. He expressed concern of the member-NARS and other partners in their commitment towards formulation of the Plan of Action for the implementation of this vision. He also referred to mobilization of funds from donors for concrete projects/activities. These activities revolve around the four strategies outlined in the Vision document and these were discussed and the outcome is briefly presented:

### Strengthening Regional Cooperation and Partnerships

In order to orient regional cooperation, it was considered worthwhile to re-visit the 1996 regional priorities. Four concrete ideas were mentioned to guide this effort:

1. Involving other stakeholders in the review of the regional priorities (*i.e.* NGOs, private sector, farmers' organizations), besides NARS and IARCs. This will also help to address one of the pending issues in strengthening inter-stakeholder dialogue at the regional and sub-regional level.
2. Involving the sub-regional associations, in the updating of these priorities. It should be pointed out that the 1996 priorities were formulated for each of the four sub-regions that constitute the Asia-Pacific region. In addition to this, nineteen topics were identified as constituting "common regional research priorities" (shared by all sub-regions).
3. Integrate the priority-setting processes of other regional organizations (such as NACA, APSA, APAFRI, GoFAR, etc.), as part of the process of strengthening the role of APAARI as the Asia Pacific Regional Forum.
4. Making a regional input into the CGIAR agenda-setting process, but in doing so, APAARI establishes regional priorities to reflect the needs of the member NARS in the Asia-Pacific region, on the basis of its own dynamic strength, in order to orient cooperation within the region, realizing the differences in mandate and in perspectives between the CGIAR and NARS. For this priority setting cooperation with GFAR will be beneficial in order to exchange experiences with developing countries in other regions that are addressing similar issues. It was suggested that the sub-regional associations or groups will be requested to carry out a first exercise of reviewing their sub-regional priorities by April 2001, in order to be able to make an input prior to MTM-2001. The next meeting of the Executive Committee of APAARI could be scheduled for September or very early October of 2001, holding an expert consultation meeting on regional priorities at the same time. This will allow APAARI to make an input to ICW-2001.

The above activities may require APAARI to hire a consultant to work with it in the design of the guidelines to be used in this process, and may be to organize a workshop to discuss these guidelines before adopting them. The distinction and complementarity between national priorities and regional priorities will have to be better elaborated.

The need to *strengthen national priority setting* was identified as being of high priority. ISNAR reiterated the offer it recently made in the NARS Steering Committee of GFAR, of facilitating the distribution of the information it has on methodologies for national priority-setting to APAARI members, through a CD-ROM or through other media. Also NARS can learn a lot from each other through exchanging their own experiences in priority-setting at the national level. GFAR will facilitate inter-regional exchange of experiences among Regional Fora on this topic.

The second major topic covered was that of *research partnerships*, which is one of the main functions of APAARI. Two cases were highlighted.

- A proposal for partnership among CGIAR centres in order to improve the complementarity and effectiveness of their programmes in the Asia-Pacific region, was presented by the CGIAR (by ICRISAT for South Asia and by IRRI for South East and East Asia). Participants pointed out that it would be preferable if these partnerships are also made with the NARS of the region and with other stakeholders.
- An analysis was made of various opportunities for partnerships in key “strategic areas”, where the efforts of the various stakeholders could converge in a concerted effort that may maximize the possibility of development impact. Some of the opportunities identified are: an integrated approach to the management of specific eco-geographic regions such as river basins (the Mekong being one of the possible options); second, the impact of global climate changes on agricultural productivity; and third, responding to concrete issues related to the sustainability of agricultural production. The APAARI Secretariat will further pursue these ideas with the various potential partners.

Another major topic of the regional strategy relates to strengthening the information and communication capacity of the NARS in the region. A concrete proposal for the implementation of the information and communication component of the APAARI Vision 2025 is being developed in the *APARIS project* that was presented and discussed in detail in another session. In the formulation of this project, the need to use the expertise that already exists in the region received particular mention.

### **Advocacy Role for APAARI**

The importance of the advocacy role was extensively discussed and three possible activities to be carried out by APAARI or by its members were identified:

1. Prepare discussion papers for policy-makers on various aspects related to the strategic importance of agricultural research (ARD) and on the importance of public investment in ARD. GFAR could facilitate the inter-regional exchange of experiences and of policy papers, that may help to strengthen the various initiatives that Regional/Sub-regional Fora are undertaking.
2. APAARI should look into the possibility of organizing a regional consultation meeting on these topics, to which senior policy-makers could be invited. Through such a meeting, a dialogue between NARS leaders and senior policy-makers could be promoted. It is important to include not only Agriculture Ministers, but also Finance Ministers and parliamentarians, given the key role the latter play. However, resource availability would ultimately determine the extent of such participation.
3. As an option, it was pointed out that with the support of FAO the possibility of organizing a ministerial meeting in the region, or of taking advantage of a scheduled one, will be explored, in order to put this topic in the Ministers’ Meeting agenda.

### **Human Resources Development**

The third regional strategy for the implementation of the APAARI Vision 2025 is that of facilitating training of human resources in the region in key topics of ARD and of NARS management. Two points were made:

1. Various working groups during the current APAARI meeting have identified training needs of the region. These could be integrated into the Plan of Action, if funds become available.
2. A more explicit effort of identifying opportunities for training in the region will have to be made as a long term strategy.

### **Publication Enhancement and Dissemination**

The fourth regional strategy is related to the enhancement of scientific publications in the region and of dissemination efforts in ARD. Several working groups identified technology dissemination needs

in the region which could be integrated into the Plan of Action if funds become available. The need to enhance publication activities, specially of success stories, was pointed out.

### **Other Strategic Issues of ARD**

It was felt that the conclusions and recommendation of working group No. 1 can be integrated into this part of the Plan of Action for the implementation of the APAARI Vision 2025.

The foregoing was extensively elaborated on and discussed as follows:

Dr Paroda stressed stronger role of networks, many of which are in place for over five years now. In the context of new thrusts there is need to develop priority setting mechanisms on regional and sub-regional level. Even TAC is now also interested in regional agenda and have identified the regional fora as field of operation. Status papers for the sub-regions could be developed. Also, Human Resource Development would need a decentralized approach. Referring to ICT strengthening, he cautioned that ICT does not replace our present system of publication and information dissemination. Currently success stories are translated into local languages. More success stories are required for printing and dissemination.

Dr Fitzhugh, ILRI urged the NARS to identify areas of common interests and shared mandate, including collaboration with the private sector. Dr Bevege, responded that an update on the research priority setting, carried out earlier in 1996, may be needed by the middle of 2001. He also urged that priority setting on national level needs to be strengthened, with effective role of the private sector. Dr Paroda pointed out that the involvement of the private sector is already foreseen in the vision document. He further stressed that the mandate of the CG has also widened as their focus shifted from food security to poverty. The CG will not be able to cover that alone. The focus should go back to the NARS, and this is also well reflected in APAARI's vision document. Engineering the NARS is one of the mechanisms. Most of the programmes that were there with NARS are being reduced. CG-centres should look into possibilities for strengthening their role in national programmes in view of real comparative advantage.

Dr William D. Dar stressed the fact that vision should lead to action and enhancing regional cooperation and partnership is a key-issue. He pointed out that ICRISAT is looking for a coherent framework to enhance partnership with NARS and considered this as their responsibility. We will start discussions to structure this in February 2000. We have to do our update on priorities which should set directions for the centres as well.

Dr Ghodake urged that priority setting should be done at the national level. In spite of free trade and exchange of information, there are location specific realities that should be considered. APAARI should take a lead with ISNAR/GFAR to come up with priorities on national level.

Dr Stein Bie referred to the training material for priority setting that is available free of cost from ISNAR. A tailor made approach could be used to make the materials ready for use by NARS in the region. However, taking a few countries together in a training gives considerable added value. Dr Bevege, preferred to assist the national systems to get their national priorities identified, whereas APAARI could focus on these at the regional level. Dr Fernando Chaparro said that the NARS-SC minutes could be distributed to the members, as these priority setting issues were widely discussed during the recent NARS-SC. Dr Paroda urged to put research priority setting on front. He suggested to organise training at sub-regional level in cooperation with partners and perform a sub-regional priority setting exercise. He referred to the FAO initiative in writing a paper that shows how ARD has helped but had also affected the sustainability of important production systems.

Dr Malik complemented the Vision document which he considered very comprehensive. The research agenda should have three levels of action: long term/medium term/short term priorities. He suggested



to invite Finance Ministers along with Ministers of Agriculture in policy meetings. Dr Lee suggested that APAARI would ask its partners to put their thoughts on priority setting exercise. Also APAARI should make use of their own resource-countries like Japan, Taiwan, Australia, India as a driving force. Dr Bueno, NACA, emphasised that the interests of all the stakeholders should be included through a participatory process. Dr Kirtisinghe referred to WTO and FAO and pleaded against free trade in terms of agricultural production and the interest of resource poor farmers in the developing countries.

Dr Joshy agreed with the priority setting approach but was worried about the political will; the commitment of the local governments. APAARI should come more aggressively in the scene. This was also supported by Thailand. Dr Ghodake confirmed that decision makers should be involved. Dr Kirtisinghe mentioned that an external review of CARP was conducted with GTZ and ISNAR. The fact that these international players were involved was important in pursuing the issues with the local government. Dr Bevege stated that the implementation of the programmes should be taken forward together with partners of APAARI. Next year, a meeting may be held with the concerned ministers, if possible.

Dr R.B. Singh noted that APAARI was already represented in the Asia-Pacific Regional Conference wherein the policy makers are also present. During mid 2001, FAO is planning to hold a ministerial meeting of selected countries to see to the multifunctional character of agricultural land. Also ARD could be taken up, with more specific allocation to research. APAARI can help in producing a paper on the importance of investment in ARD as it relates to issues of investment. Dr R.B. Singh also pointed out that poverty does often not relate to availability or production levels of food but it actually relates to lack of access to food.

Dr Fernando Chaparro, chairman of the session, highlighted on the several suggestions/recommendations made such as: to prepare paper that clearly shows the diminishing trend in investment and the negative effect of it; policy makers should be invited for a given session in the next meeting; ARD donor lobby to get our agenda on their agenda.

Dr Bevege, reacting to the foregoing discussions, added that taking national priorities to CG meetings is a task of the centres. Dr Malik urged to bring the APAARI Vision into action. He stressed tapping the resources within NARS countries with strong programmes and with lesser dependence on foreign help. Dr Chaparro suggested to have national priorities ready before the MTM meeting next year upon which Dr Paroda replied that our deadlines should not be meetings of some other organizations although some time such directives may be needed. A subgroup with Dr Malik, Dr Chaparro, Dr Bevege and Dr Ghodake as members was constituted to work on this time-frame.

## **PLENARY SESSION/RECOMMENDATIONS**

The Plenary Session was chaired by Dr R.S. Paroda, Executive Secretary of APAARI. The specific recommendations and suggestions given by the participants were endorsed. These have been summarized below:

### **Strategies for Agro-biodiversity Conservation in the Asia-Pacific Region**

- National action plans for agro-biodiversity conservation should be developed as high priority; priorities for conservation of species, commodities etc, to be determined primarily by NARS.
- For information sharing, use of a common communication system, such as SINGER developed by CGIAR, was advocated or APARIS could be established to meet regional needs.
- Greater need for capacity building/training among NARS was stressed, making use of APAARI.

- Public awareness, in particular among policy makers, assumes high concern. Regional ministerial conferences need to be organized preceded by workshops on agro-biodiversity conservation by FAO, IPGRI, GFAR and APAARI jointly. At the national level, focus should be on senior research managers and grassroots organizations and NGO's. Also educational awareness on the importance of agro-biodiversity conservation needs to be created at the primary and secondary school level. Relevant materials need to be developed for use by NARS.
- Regional networks would need strengthening for their sustainability. Both national and regional networks should also include NGOs and other grassroots organizations. Need was expressed for establishing also the regional networks on livestock and genetic resources of microbes.

### **IPR and Sharing of Genetic Resources**

- Based on the needs of all member-NARS, APAARI will hold an Expert Consultation on 'Information and Training in the field of Intellectual Property Protection of Genetic Resources' in the near future.
- APAARI Secretariat will constitute a task force to conduct an 'Electronic Conference' to survey member-NARS, to assess the current status of IPR legislation and policies/practices and identify priority issues of national and regional concern.
- The Expert Consultation will focus on sharing of experiences/expertise among member-NARS and other institutions; IPGRI and GFAR collaboration in particular will be utilized in the planning and execution of this consultation.

### **Future Strategies in INRM in Asia-Pacific Region**

- APAARI has a facilitating and coordinating role in the IARC-NARS partnership in INRM research, based on the framework developed by CGIAR Centres at the Penang meeting; IARCs have a major role to play in INRM with the NARS partners to ensure that the required basic, holistic research and methodologies are elucidated.
- A systems approach encompassing farmers, institutions and agro-ecosystems is crucial to the success of INRM, and the sustainability of the ecosystems. Critical issues and concerns on different aspects of INRM focusing on importance of water management, assessing soil degradation and desertification, Integrated Nutrient Management (INM), Integrated Pest Management (IPM), Resource Conservation Technologies (RCT) for pilot testing, particular focus on diversification of Rice-Wheat system with potato, legumes, maize and vegetables; farmers research needs to be uncovered using participatory approaches; concern on the impact of climatic change on agriculture; enhanced use of underutilized crops (fruits, cereals, legumes), etc. are to be addressed on priority.

### **Information Communication Technology (ICT)**

- Considering the deliberations of the ICT Expert Consultation held prior to this meeting, and the expectations/concerns of member-NARS in developing ICT activities; it was urged that the Executive Committee of APAARI, looks closely at the possibilities of piggy backing further on existing ICT activities in the region and also looking outside the field of agriculture in the strict sense, and to utilize the synergies with FAO, GFAR, CGIAR institutes and other regional/international partners. Major recommendations related to advancing the establishment of APARIS under the aegis of APAARI are listed below:
  1. The ICT expert group from NARS and regional organizations, as convened for this consultation, should form a steering committee to enable APARIS to determine its structures, standards and work programme.
  2. An APARIS support group be constituted comprising, *e.g.* APAARI, FAO, GFAR, CABI, IARC (representative), *et al.* which will be responsible for raising resources from donors and others

for the operation of APARIS – there should be a link between the two groups by representation of the steering committee serving also on the support group.

3. TORs for these two groups should be prepared and their membership confirmed.
  4. APARIS proposal should be prepared as a project activity identifying elements which can be undertaken by the partners (including APAARI) and those for which donor support will be sought. This proposal should subsume the current proposal on Knowledge and Information Systems of APAARI as its elements are parallel to those proposed for APARIS.
  5. Discussions should be held with organizations which might be prepared to provide support for a coordinator support for APARIS, at least for next three years in the initial stages. For this, possibilities for continued support from ACIAR should be explored.
  6. The feasibility study on APARIS as a gateway and its site mapping using the current APAARI website as a basis should be the first activity under APARIS, in collaboration with CABI under the partnership facility.
- APAARI Secretariat activities could focus on linking of national web-based activities, to improve/undertake electronic distribution of scientific publications, the creation and maintenance of scientific databases and provide support to training to establish stronger knowledge-sharing culture within and between agricultural institutions and other related organizations.
  - APAARI secretariat to assist on priority the member-NARS currently less developed in ICT so that they can benefit from the contributions that ICT can make to promote/strengthen their agricultural research and development. ICT needs of these NARS, such as the Pacific Island Countries are thus to be prioritized *vis-à-vis* action required by APAARI Secretariat.

### **APAARI Vision 2025: Emerging Plan of Action**

The Plan of Action is conceived as an interrelated set of activities that APAARI members and partners agree to undertake jointly on the five strategies outlined in Vision 2025, namely (i) strengthening regional cooperation and partnerships, (ii) publication enhancement and dissemination, (iii) human resource development, (iv) advocacy for ARD, and (v) other strategic issues related to ARD improvement.

#### ***Strengthening Regional Cooperation and Partnerships***

It was stressed that APAARI takes a relook at the regional priorities already identified/recommended for regional cooperation/partnerships in R&D, in order to crystallize current priorities. The following follow-up in this context was suggested:

- The sub-regional associations/groups will be requested to review their priorities preferably by April 2001, so that their input is made available to the Mid Term Meeting of the CGIAR in May 2001.
- An Expert Consultation on regional priority setting needs to be organized by APAARI during its next Executive Committee meeting in September/October 2001, so that the outcome of this consultation can be made available at the International Centres Week in November 2001.
- APAARI will have a consultant to design guidelines for priority-setting activities; and to consider organizing a workshop to discuss these guidelines before adopting them. The need to define regional priorities – the distinction and complementarity between national and regional priorities will have to be better elaborated.
- The need to strengthen national priority setting was identified as being of high priority, as national priorities are a very important input for regional priorities. In order to address the needs of the member-NARS, the following activities need to be carried out by APAARI and other partners:
  - ISNAR will facilitate the distribution of information on methodologies for national priority-setting to APAARI members through a CD-ROM or other media.

- Dissemination of such information on good practice/priority setting documents developed by NARS for exchange of such material and sharing of NARS-NARS experiences in this context on national priority setting by NARS.
- GFAR will facilitate inter-regional exchange of experience among regional fora on regional priority-setting.
- Enhancing research partnerships in the region under APAARI umbrella such as through (a) partnership among CGIAR/IARCs to improve the complementarity and effectiveness of their programme in the Asia-Pacific region (ICRISAT in South Asia and IRRI in Southeast and East Asia). Also, such successful partnerships to be made available to other NARS/stakeholders as per their needs. Other such partnerships in key strategic areas include an integrated approach to the management of specific ecogeographic regions such as on the river basins (IWMI)-Mekong river basin, studying impact of global climatic changes on agricultural productivity (ICRISAT), responding to concrete issues related to sustainability of agricultural production. APAARI may involve other potential partners in such proposals/endeavours for future R&D collaboration.
- Strengthening the information and communication capacity of the NARS in the region assumes a high regional priority. The APARIS (Asia-Pacific Agricultural Research Information System) Project Proposal that emerged from the ICT Consultation preceding this General Assembly and Expert Consultation meeting has proposed a set of activities for the next two years with an indication of who can do what/specific activity involvement of NARS/partners elaborated in the document 'Towards an APARIS for APAARI: Draft Report of the Expert Consultation on Development of an APARIS', Chiang Rai, 6-7 November 2000. In the formation of the project, emphasis has been laid on the use of existing regional expertise.

### ***Advocacy Role of APAARI***

In this, three possible activities to be carried out by APAARI or by the members were identified:

- Prepare discussion papers for policy makers on various ARD aspects related to the strategic importance of agricultural research and development. In this task, GFAR could facilitate the inter-regional exchange of experiences and of policy papers which will help to strengthen the various initiatives that Regional/Sub-Regional Fora are undertaking.
- APAARI will look into the possibilities of organizing a regional consultation on these topics and invite senior policy makers, thereby promoting a dialogue with NARS leaders and senior policy makers, with possible participation of besides the Agriculture Ministers, the Finance Ministers and concerned parliamentarians.
- Possibility to organize a ministerial meeting in the Asia-Pacific region with FAO-RAP support may also be looked into; or arrange such a meeting back-to-back with other scheduled ministerial meet, and/or incorporate this topic in their agenda through support from FAO.

### ***Human Resource Development***

The third regional strategy should focus on:

- Capacity building/training in key ARD areas/fields and on NARS management, research priority setting and lay emphasis on developing action plan on identified training needs/opportunities in the region and prioritizing these as per national/regional needs.
- APAARI may coordinate human resource development taking benefits of developed NARS in the region, to help less-developed NARS which need expertise and guidance.

### ***Publication Enhancement and Dissemination***

The fourth regional strategy emphasizes on the enhancement of scientific publications and dissemination in HRD in the region. These activities can be integrated into effective action plan such as need to enhance publication activities especially the success stories, and topics could be prioritized such as on RWC activities, water management, crop/animal/forestry networks.

### ***Other Strategic Issues of ARD and Networking/Coordination***

- The members stressed the need for R&D and coordination in genetic conservation and management of biodiversity/agro-biodiversity; and integrating these concerns into the plan of action for implementing APAARI Vision 2025. Major focus was on regional and crop networks, and benefits of R&D achievements to be made available to other NARS.
- It was urged that APAARI lays emphasis to develop sub-regional networks, and to help establish in particular network of Pacific Island countries; there is a niche for APAARI to be pro-active in coordinating such efforts in the sub-region.
- There is also a direct need for APAARI to coordinate networking/network activities in the region on underutilized crops with institutions such as IPGRI, FAO, other regional/international centres, for example GFAR, ICUC, NGOs etc.
- Considering the increased responsibilities of APAARI in coordinating national/sub-regional and regional activities, there is an urgent need for appointing a full time executive staff/manager/coordinator for APAARI soon (with/without external funding). The association needs to have such a staff member who can contribute effectively to the further growth of the association, and improve/strengthen existing links with stakeholders, NARS and IARCs, FAO, GFAR, etc.

Dr Paroda closed the Expert Consultation referring again to APAARI's overall strength and advantages in the advocacy role it has to play.

## **SIXTH GENERAL ASSEMBLY**

The sixth General Assembly meeting was chaired by Dr Ian Bevege. The agenda as proposed was adopted. List of participants is given in Annexure II. Agenda and the notes for each item are given in Annexure-III.

### **Welcome by Executive Secretary**

Dr R.S. Paroda, the Executive Secretary, APAARI, welcomed and thanked all the participants and particularly expressed APAARI's gratitude to Dr Ananta Dalodom, Director General, Department of Agriculture, Thailand, for hosting this meeting. He also particularly welcomed the representative of MAFF, Vietnam as new member of the Association and the representative of the Bureau for Agricultural Research, Philippines that will continue to pay their membership fees after a long period of non-contribution due to economic crises. Also Taiwan was specially welcomed being represented for the first time in the meeting. All the Associate Members and affiliated networks were also welcomed. Dr Paroda pointed to the collaborative role of APAARI in promoting agricultural research and development in the NARS in this region. He referred to the tenth anniversary of the association and recommended participants to refer to the publication "APAARI – A Decade of Progress" for its comprehensiveness in description of efforts and accomplishments of the association over the past ten years. Dr Paroda appreciated the wider participation with diverse expertise, in this important meeting.

### **Address by the Chairman, APAARI**

Dr Ian Bevege, Chairman of APAARI, welcomed the members, associate members, IARCs and others and the new members. He felt it very encouraging that under the aegis of APAARI so many institutions came together to discuss on the issues dealt with in the Expert Consultation. He stressed that all participants should take every opportunity to put forward the picture of APAARI in the region and advocate for support for ARD and APAARI. He briefly reported on the more recent activities of APAARI.

### **Action Taken Report**

Members took notice of the action taken report and appreciated the efforts made by the Secretariat in making remarkable progress since they met last.

### **APAARI Expert Consultation**

Dr Bevege reflected on the Expert Consultation that was just held stressing on both the implementation of APARIS and follow up on the Genetic Resources discussion. He pointed out that with the new ADG at FAO-RAP, some new dynamics would come in place including IPR awareness and opportunities in new sciences like biotechnology. Regarding the Integrated Natural Resource Management he mentioned that the RWC initiative should be repeated in other areas, and that there is no need to wait for donor support in this regard. He found it encouraging to have had the Director General of ICIMOD and also of ILRI participating in the meeting that brought in new dimensions. AVRDC was urged

to move forward in support of the introduction of legumes such as soybean and mungbean with concerned partners/IARCs, NARS. It was stressed that the follow-up on the Vision document should be done through a concrete action plan. Regarding APARIS, he hoped that the CG-centres would also identify their nodal points. ICT Training programmes may be offered in collaboration with AIT Bangkok. Also, he referred to regional priority setting, that has been already flagged as a major outcome of the Expert Consultation.

Dr William D. Dar, ICRISAT suggested a ICRISAT/IRRI/APAARI meeting that will help build up agenda of CG centres for the Asia-Pacific region. Dr Cantrell concurred with this idea. Dr Chaparro, GFAR, assured that GFAR has specific interest in these issues. What has been done after 1996 should be carefully reviewed. In the same way we may support and also organize exchange with other regions.

Dr Paroda mentioned the expectations from GFAR; to move from NARI to NARS in widening partnership to private sector, NGO community and farmers. He encouraged the members to ask their INPs to browse the internet on these types of partnerships. APAARI would devise suitable mechanisms of its representation in GFAR meetings on reciprocal basis. External review of GFAR will be made available to NARS. Activities of GFAR can be done through APAARI. Dr Kumar asked for a mechanism for priority setting for the Pacific Countries, Dr Bevege suggested to hook up to SPC. IPGRI particularly has taken this up. Small sub-regional consultations will be helpful.

### **APAARI Secretariat**

Dr Bevege expressed the need to operationalize Vision 2025. This needs strengthening of the secretariat with an Executive Staff possibly operating under the guidance of the Executive Secretary. Within the coming biennium, the new Executive Committee may look for funds to support this position for a period of three years.

### **Membership and Financial Status**

The new member Vietnam, and also new associate members, CIRAD and ICIMOD, were welcomed and invited to contribute on a voluntary basis. It was appreciated that all members have been paying regularly. All dues for 1999 were paid and also for 2000 a substantial number of members have already paid their dues. The audited accounts for the year 1999 were examined, discussed and approved. The statement of funds as received up to 31 August 2000 was also reviewed and efforts of Secretariat in using funds with prudence were appreciated. Dr Ian Bevege desired to prepare in future accounts in a different format, for which he agreed to supply an appropriate proforma.

### **Action Plan 2001-2002**

The action plan was approved by the General Assembly. It needs however detailing in view of the discussions during the deliberations of the expert consultation and suggestions/recommendations put forth.

### **Programme Budget for Biennium 2001-2002**

The proposed budget for the years 2001 and 2002 was approved by the General Assembly, subject to further modification and review by the Executive Committee.

### **Election of the Executive Committee**

The elections were unanimously held and the following were elected to the Executive Committee for the biennium 2001-2002.

Chairman	Dr D. Joshy	Nepal
Vice-Chairman	Dr J. Kumar	Fiji
Members	Dr I. Bevege	Australia
	Dr Z. Karim	Bangladesh
	Dr S.H. Anang	Malaysia
	Dr P.S. Faylon	Philippines
Executive Secretary	Dr R.S. Paroda	India

### **Reports on Network Activities**

Brief presentations were made on the regional research networks. APAARI is supportive of networks such as CORRA, TAMNET, RWC, CLAN, GoFAR and ICUC/UTFANET with its role as a facilitator to promote research and development in collaboration with NARS and IARCs. Reports of the networks are given Appendix-2: Networks: Brief Report.

### **Closing**

Winding up the deliberations of the General Assembly, Dr Bevege and Dr Paroda expressed on behalf of APAARI, their gratitude to the organizers of the meeting from the Department of Agriculture, Thailand. Two mementoes were presented to the members of the organizing committee. Due appreciation was also accorded for the assistance provided by the Secretariat staff of APAARI at FAO-RAP, Bangkok and at FAO, New Delhi. All members also placed on record appreciation for the effective leadership provided by Dr Ian Bevege as Chairman of APAARI during the last two years and a plaque of appreciation was presented to him by Dr R.S. Paroda, the Executive Secretary. At the end, the Chairman closed the meeting.





**THE SIXTH GENERAL ASSEMBLY OF APAARI AND  
EXPERT CONSULTATION ON STRATEGIES FOR IMPLEMENTING APAARI VISION 2025:  
STRENGTHENING AGRICULTURAL RESEARCH FOR DEVELOPMENT IN THE  
ASIA-PACIFIC REGION**

8 - 10 November 2000  
Chiang Rai, Thailand

**PROGRAMME**

**November 8, 2000 (Wednesday)**

0800 - 0900 Registration

**Inaugural Session**

	Chairman	: Dr Ian Bevege
0900 - 0910	Welcome Address	: Dr Ananta Dalodom Vice-Chairman
0910 - 0915	Objectives of the Expert Consultation and Introduction of Participants	: Dr R.S. Paroda Executive Secretary
0915 - 0930	Chairman's Address	: Dr Ian Bevege
0930 - 0940	Address by the Guest of Honour	: Dr R.B. Singh Assistant Director General FAO, Bangkok
0940 - 0955	Release of Publications and Address by the Chief Guest	: Governor of Chiang Rai
0955 - 1000	Vote of Thanks	: Mr P.K. Saha
1000 - 1030	Tea Break	

**THE EXPERT CONSULTATION ON STRATEGIES FOR IMPLEMENTING APAARI VISION 2025 :  
STRENGTHENING AGRICULTURAL RESEARCH FOR DEVELOPMENT IN THE ASIA-PACIFIC  
REGION**

**Technical Session-I Natural Resource Management : Opportunities and Challenges – Agro-biodiversity  
Conservation, Sustainable Use and Management**

	Chairman	: Dr R.B. Singh
1030 – 1100	Dresden Declaration on PGR	: Dr Fernando Chaparro
1100 – 1130	Strengthening Regional Collaboration and Coordination in PGR Activities	: Dr Percy E. Sajise
1130 – 1200	Strengthening PGR Policies and Programmes at National Level – APAARI's Role	: Dr R.S. Paroda
1200 – 1300	Working Group Discussion I & II	

**WORKING GROUP DISCUSSION-I**

**Developing Strategies for Agro-biodiversity Conservation  
and Management in Asia-Pacific Region**

Facilitator : Dr C. Hoogendoorn

**WORKING GROUP DISCUSSION-II**

**IPR and Sharing of Genetic Resources**

Facilitator : Dr R.P. Cantrell

1300 – 1400 Lunch

**Technical Session-II Integrated Natural Resource Management for Sustainable Production:  
Regional Efforts and Concerns – Opportunities and Challenges**

	Chairman	: Dr K.A. Malik
1400 – 1415	ICRISAT	: Dr William D. Dar
1415 – 1430	IRRI	: Dr Ronald P. Cantrell
1430 – 1445	CIMMYT	: Dr R.K. Gupta
1445 – 1500	IWMI	: Dr R. Barker
1500 – 1515	ICARDA	: Dr Mohan Saxena
1515 – 1530	ILRI	: Dr Hank Fitzhugh
1530 – 1545	ICIMOD	: Dr. J.G. Campbell
1545 – 1615	Tea Break	

**1615 – 1800 WORKING GROUP DISCUSSION-III**

**Developing Future Strategies and Action Plan**

Facilitator : Dr William D. Dar

**November 9, 2000 (Thursday)**

**Technical Session-III Strengthening Information and Communication Technology**

- Chairman : Dr Stein W. Bie
- 0900 – 0930 A Report on ICT Network Meeting : Ms J. Achara
- 0930 – 1000 Comments of key-players in ARD information management  
- FAO-WAICENT : Dr S. Rudgard  
- GFAR-EGFAR : Dr F. Chaparro  
- CABI : Dr E. Dodsworth  
- ISNAR : Dr S.W. Bie
- 1000 – 1030 Tea Break

**Technical Session-IV APAARI Vision 2025**

- Chairman : Dr Fernando Chaparro
- 1030 – 1200 Round Table Discussion on Developing an Action Plan
- 1200 – 1300 Lunch
- PLENARY SESSION**
- Chairman : Dr R.S. Paroda
- 1300 – 1500 Working Group/Technical Session Presentations/Recommendations by Facilitator/Chairman
- 1500 – 1530 Tea Break
- 1530 – 1730 Executive Committee Meeting of APAARI
- 2000 Dinner hosted by APAARI

**November 10, 2000 (Friday)**

**THE SIXTH GENERAL ASSEMBLY OF APAARI**

- Chairman : Dr Ian Bevege  
Vice-Chairman : Dr Ananta Dalodom  
Executive Secretary : Dr R.S. Paroda
- 0900 – 1030 General Assembly Meeting
- Welcome and Introduction to Agenda : Dr R.S. Paroda
- Chairman's Address : Dr Ian Bevege
- Discussion on Agenda Items  
(including progress on CORRA, TAMNET,  
RWC, CLAN, GoFAR, ICUC/UTFANET)
- 1030 – 1100 Tea Break
- 1100 –1230 Discussion on Agenda Items
- Vote of Thanks : Dr Narongsak Senanarong
- 1230 – 1400 Lunch
- 1400 – 1600 Visit to Chiang Rai Agricultural Research Station



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## Networks

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**THE SIXTH GENERAL ASSEMBLY OF APAARI, 10 NOVEMBER 2000,  
CHIANG RAI, THAILAND**

**AGENDA**

1. Welcome Address by the Executive Secretary and Introduction to the Agenda
2. Address by the Chairman, APAARI
3. Action Taken Report
4. APAARI Expert Consultation
5. Additional APAARI Activities
6. APAARI Secretariat
7. Membership and Financial Status
8. Action Plan for 2001-2002
9. Programme Budget for Biennium 2001-2002
10. Election of Executive Committee
11. Date and venue of the Sixth Executive Committee meeting
12. Any other Item

**AGENDA NOTES**

**AGENDA ITEM NO. 1 : WELCOME ADDRESS**

**AGENDA ITEM NO. 2 : CHAIRMAN'S ADDRESS**

**AGENDA ITEM NO. 3 : ACTION TAKEN REPORT**

The important tasks accomplished as a follow-up of the Fifth Executive Committee meeting of APAARI and Expert Consultation to Develop APAARI Vision 2025, held from November 29 - December 1, 1999 at Bangkok, hosted by FAO Regional Office for Asia and the Pacific, Thailand, are as under:

**a. Publication of the Newsletter**

Two issues of APAARI Newsletter, December 1999 and June 2000 were published. The issues were well received. It was also affirmed that for the free flow of information, this initiative of APAARI should continue. The next issue (December 2000) is being processed.

## **b. Success Stories**

- The success story on “Bivalve Mariculture in India (Pearl Oyster, Edible Mussel and Oyster) – A Success story in Coastal Ecosystem Development” has been distributed to the members, associate members and other concerned organizations, scientists, etc. to promote dissemination of information and technology transfer.
- The success stories on “Baby Corn Production in Thailand”, “Tilapia Farming in the Philippines” and “Orchids in Thailand” were reprinted and together with some other success stories were distributed at “GFAR 2000: Strengthening Partnership in Agricultural Research for Development, May 21-23 2000, Dresden, Germany”.

Three more success stories are being processed for printing:

- “The Farming of Red Seaweeds (Carrageenophytes) in the Philippines: A Success Story” submitted by Dr Rafael D. Guerrero III, Executive Director of the Philippine Council for Aquatic and Marine Research and Development, is now being processed for publication.
- Success Story entitled “Labour Saving Technologies of Rice in Korea – Direct Seeding and Machine Transplanting”, submitted by Drs Je Kye Kim, Moon-Hee Lee and Young Sang Kim, National Crops Experimental Station, Rural Development Administration (RDA), Suwon, Republic of Korea, has been scrutinized and a request for modifications has been sent to Dr Kim.
- For Success Story on “Successful Research and Development of Integrated Agriculture-crop-livestock Farming System in Vietnam”, Dr Lee Thanh Luu, Vice-Director, Research Institute for Aquaculture, No.1, Dinh Bang-Tien Son-Ha Bac, Vietnam has been requested to submit the manuscript soon.

Further, Dr S.K. Vasal, Team Leader, Regional Asian Maize Programme is still working on a manual on Hybrid maize technology for appropriate benefit to the NARS in the region. He has been requested to expedite this for publication.

## **c. Other Recent Publications**

- Proceedings of the Fifth Executive Committee meeting and Expert Consultation to Develop APAARI Vision 2025, November 29 - December 1, 1999, FAO-RAP Bangkok, Thailand were published and distributed to the participants of the meeting and relevant organizations.
- The publication “APAARI Vision 2025, Agricultural Research for Development” was finalized and printed after incorporating comments/suggestions of member NARS. It has been widely distributed; 300 copies have also been distributed at GFAR 2000, May 21-23, Dresden, Germany. In the meantime a reprint has been produced of which a copy will be distributed again to members attending the General Assembly. The Vision document has been well received.
- The report on the “Status of Plant Genetic Resources Conservation and Utilization in the Asia-Pacific Region” has been printed and distributed. It provides useful information on PGR conservation and use in national and regional context, and has received wide appreciation.
- The booklet “APAARI – A Decade of Progress” was also printed and distributed at GFAR 2000, May 21-23, Dresden, Germany. It reflects on 10 years of existence of the association and provides a summary of activities undertaken and the publications produced.

For wider dissemination, copies of all these publications can be sent to members, associate members, concerned organizations and various institutions.

## **d. Mailing List**

Further additions were made to the existing mailing list maintained at the Delhi office of APAARI. The present list has 644 addresses including different institutions, NGOs, scientists, policy makers,

donors etc., from the Asia-Pacific region and several other international and regional organizations. Members are requested to suggest (national) institutions where our publications be sent for wider dissemination.

#### **e. APAARI's Contribution to Regional Networks/Initiatives**

APAARI was one of the co-sponsors of the "Workshop on the Impact on Research and Development of *Sui Generis* Approaches to PVP of Rice in Developing Countries", held in Los Baños from 16-18 February, 2000. The workshop was convened by the International Rice Research Institute in cooperation with the Council for Partnership on Rice Research in Asia (CORRA), the Global Forum on Agricultural Research (GFAR) and the Private Sector Committee of the CGIAR.

APAARI was also invited to participate in the Eleventh NACA Governing Council Meeting from 26-27 February 2000, Bangkok, Thailand but could not do so due to short notice.

APAARI has also actively corresponded with the Asia Pacific Association of Forestry Research Institutions (APAFRI) and approached them for Associate Membership. APAARI and APAFRI committed to attend each other's meetings. The Second Assembly of APAFRI was held in Kuala Lumpur on 11 August 2000, during the XXI IUFRO World Congress and the Chairman of APAARI, Dr Bevege, participated and gave an update on our activities.

APAARI also participated in the 25<sup>th</sup> FAO Regional Conference for Asia and the Pacific 28 August – 1 September. Chairman, Dr Bevege, briefed about APAARI activities and stressed on the need for more investment in Agricultural Research for Development.

#### **f. ICT Expert Consultation**

APAARI entered into an agreement with the NARS-Secretariat to organize an ICT Expert Consultation to discuss the establishment of an Asia-Pacific Regional Agricultural Information System (APRAIS). This consultation is scheduled to be held prior to the Sixth General Assembly of APAARI on 6-7 November, 2000, in Chiang Rai. A network of information nodal points (INP) of the member countries has been established and they have been invited to this Expert Consultation along with sub-sectoral regional bodies (APAFRI, NACA, APHCA) to review the Regional Information Strategy that has been developed by APAARI in consultation with FAO-WAICENT, CABI and ISNAR. A base paper has also been attempted on ICT Status based on a survey conducted by Ms J. Achara, APAARI IT Manager. In this meeting a draft Action Plan will be put up for approval of the General Assembly, based on the outcome of the ICT consultation held on 6-7 November, 2000.

#### **g. Homepage Improvement**

The homepage of APAARI is now hosted with Skali Multimedia Application Centre (SMAC) in Malaysia. The IT Manager of APAARI has been updating the homepage on a daily basis and has also improved its design. It accommodates online storage of publications. All success stories, reports of APAARI meetings and Expert Consultations and Newsletters are now available online in PDF format. It functions also as a portal to the homepages of all the members and associate members besides providing contact information from the NARS, and links to related sites to facilitate networking and information dissemination.

### **AGENDA ITEM NO. 4: APAARI EXPERT CONSULTATIONS**

Consultation on Strategies for implementing APAARI Vision 2025

It was agreed in the last General Assembly Meeting that an Expert Consultation on Strategies to implement APAARI Vision 2025 will be organised along with Sixth General Assembly to be held

at Chiang Rai, Thailand from 8-10 November 2000. This meeting was successfully organized with kind cooperation of Dr Ananta Dalodom, Director General, Department of Agriculture, Thailand. The logistic arrangements were also ably attended to by Mr P.K. Saha, Plant Protection Officer at FAO-RAP. A brief report on the Expert Consultation will be put up for kind information of all the members attending the General Assembly.

### **AGENDA ITEM No. 5 : Additional APAARI Activities**

#### **NARS-APAARI-ICRISAT-ICARDA Proposal to IFAD**

APAARI was asked to provide interim-support to CLAN and the Executive Committee agreed to provide an initial support for the year 2000. However, CLAN was not able to utilize this support for its activities in 2000. ICRISAT has now asked the Secretariat to make available the funds of US\$15,000 (agreed earlier with the approval of Executive Committee for the year 2000) for CLAN activities during 2001. Accordingly, the same may kindly be agreed to. ICRISAT will also report the status of CLAN activities and funding prospects from IFAD and other sources.

#### **MoU with ICUC**

Dr Nazmul Haq, Director, International Centre for Underutilized crops at the Institute of Irrigation and Development Studies, University of Southampton, U.K., has requested for developing an MoU with APAARI. ICUC besides supporting the Underutilized Tropical Fruits in Asia Network (UTFANFT), is interested in establishing a Regional Network on Underutilized Crops for Asia and the Pacific. A proposal to this effect will be presented by Dr Nazmul Haq during the General Assembly meeting for consideration.

#### **APAARI's Participation in GFAR**

Nine member-NARS were present at the recent GFAR 2000 meeting in Dresden. Four case-studies were presented through APAARI:

- *Under Sub-Plenary 1: Genetic Resource Management and Biotechnology*, the case study entitled "Development and Use of Hybrid Rice Technology in India", was presented by Dr K. Krishnaiah, India;
- *Under Sub-Plenary 2: Natural Resource Management and Agro-ecology*, the case study entitled "The Rice Wheat Consortium for the Indo-Gangetic Plains: An Ecoregional Partnership for Enhancing Productivity in a Sustainable Way in South Asia", was presented by Dr Larry Harrington, CIMMYT;
- *Under Sub-Plenary 3: International Cooperation on Commodity Chains*, the case study entitled: "ICLARM & ACIAR: IARC-Donor Partners for Progress in Aquaculture in the Pacific Islands", was presented by Dr M. Gupta from ICLARM;
- *Under Sub-Plenary 4: Policy Management and Institutional Development*, the case study entitled "Network of Aquaculture Centres in Asia-Pacific: Coordinating Regional Research and Development in Aquaculture", was presented by Dr Pedro Bueno from NACA.

As one of the five regional fora represented in this conference, an update on APAARI activities was also presented by Dr Bevege.

APAARI had a major exhibit stall at the Poster Session of the conference to display its Mission, Vision and Activities and its publications. A poster that contained information on APAARI's objectives, vision, publications, membership and associate membership, website, was produced. APAARI's Vision 2025 document; a new booklet entitled: "APAARI – a Decade of Progress" and all the success stories published by APAARI were distributed widely. The APAARI stall attracted considerable attention and most of the participants were appreciative of APAARI initiatives. A copy of the APAARI poster is also displayed here as well.

Ms J. Achara, IT officer, APAARI and Mr R. van Hoffen, APO, APAARI also participated in a parallel meeting with IT staff of the different regional fora and global information leaders. It was decided to constitute a global group to interact and update on advances made by the Regional Agricultural Information Systems. The 'Partnership among Regional Agricultural Information Systems' (PRAIS) is an efficient mechanism to articulate, facilitate and enhance the implementation of the regional systems.

Dr Ian Bevege, Chairman, APAARI participated in Global Forum 2000 and made a comprehensive presentation on the activities of APAARI. Dr R.S. Paroda, Executive Secretary, is the Chairman of GFAR and thus, presided over the Global Forum meetings in Dresden. GFAR 2000 was acknowledged as a great success.

### **GoFAR**

At the request of ICLARM, a partial support of US\$10,000 has been agreed for holding the second meeting of GoFAR. This meeting will be held during early 2001.

### **Collaboration with CABI, ISNAR and ACIAR in Information Strengthening and Capacity Building**

Two workshops focussing on information management were being organized during November 1999, with APAARI as a co-sponsor.

- i. "Harnessing Information for Development": An International Training Workshop was organized by CABI South East Asia Regional Centre in collaboration with University Putra Malaysia (UPM), Serdang, Malaysia, from 15-19 November 1999. APAARI has supported participation of six scientists from its member countries – one each from Nepal, Bangladesh, Sri Lanka, Pakistan and Malaysia. Partial support was also provided to participant from Iran.
- ii. Workshop on "Information Management for Agricultural Research" sponsored by CABI, ISNAR, ACIAR, APAARI and UPM, was organized at the Asian Institute of Technology, Bangkok, Thailand from 22-29 November 1999. Participants from India and Thailand, and some experts, attended this workshop.

An electronic conference was organized/moderated by ISNAR as a follow up to these two workshops. This electronic conference was a web-mirrored, e-mail forum to discuss agricultural information strategies in the Asia-Pacific region but had to be closed down due to lack of participation. The NARS leaders were then again approached to identify their Nodal Information Officers of APAARI member countries. Some of them had not attended the workshops in Bangkok and Kuala Lumpur. This new group started to interact this time moderated by the APAARI IT Manager and most of them have already met in the Expert Consultation on the Development of an Asia-Pacific Regional Agricultural Information System (APRAIS), 6-7 November 2000 in Chiang Rai, Thailand.

### **AGENDA ITEM NO. 6 : APAARI Secretariat**

Staff professional development was given due emphasis at APAARI Secretariat. Ms J. Achara recently attended the Second Asian Conference of the Asian Federation for Information Technology in Agriculture (AFITA), June 15-17, 2000. She presented a poster on APAARI activities and upcoming events of APAARI ICT activities. A plenary presentation was given on APAARI's role and activities in the Asia-Pacific region. It was an excellent opportunity to building networks with other IT experts and scientists from various organizations active in the region.

Mr Reinier van Hoffen, APO was deputed by APAARI at the course on project management organized by Management for Development Foundation in Ede, The Netherlands. The Secretariat followed up on the extension of the contract of Mr Reinier van Hoffen. His contract has been



extended by FAO for one more year (till 7/8/01) for which General Assembly may like to place on record its appreciation for FAO and the Netherlands Government. If approved, the Secretariat will make an advance request for further extension of his contract for a third year.

Similarly, APAARI places on record its appreciation for ACIAR for partial support towards APAARI Secretariat, including support to IT Manager Ms Achara thus enabling advance in ICT activities.

## **AGENDA ITEM NO. 7 : Membership and Financial Status**

### **Membership**

APAARI had approached China, Indonesia, Myanmar, Laos and Vietnam; and organizations such as IBSRAM and APSA, to become (associate) members. Vietnam has consented to join from 2000 onward. APAARI Executive Committee welcomes Vietnam. APSA and Myanmar have expressed interest but due to financial constraints will not be able to join at present.

The International Centre for Integrated Mountain Development (ICIMOD); International Centre for Underutilized Crops (ICUC); Centre of Excellence in Water Resources Engineering (CEWRE); and the International Livestock Research Institute (ILRI) have been requested by APAARI to become its Associate Member. Necessary forms etc. have been sent to all of them.

APAARI sub-group with Dr Ian Bevege as Chairman and Dr M. Taeb and Dr Faylon as members have been interacting through e-mail and will provide an update on the subject.

### **Financial Status**

The NARS who have not yet paid their membership fee for 1999 and 2000 were approached and requested to clear their dues. The Associate Members were also likewise requested for their contribution. A status regarding membership fee received from different members and associate members is given in Annexure-IIIa.

Extra funds (USD 44,000) were received from the NARS secretariat of the GFAR for reprinting of success stories, preparing the case-studies and organizing the ICT Expert Consultation prior to the General Assembly. Funds/Expenditure incurred during 1999 is given in Annexure-IIIb and up to August 2000 is given in Annexure-IIIc.

## **AGENDA ITEM NO. 8 : Action Plan for 2001-2002**

The activities planned are as follows:

- Publication of Newsletter
- Publication of Success Stories
- Publications of Technical Reports, Proceedings.
- Support to important Regional Networks
- Planning for the Sixth Executive Committee meeting/Expert Consultation
- Building on an internal information/knowledge network and contributing to the development of a Regional Agricultural Information System (RAIS)
- Homepage development and its updating

**AGENDA ITEM No. 9 : Programme Budget for Biennium 2001-2002**

The budget for 2001, as already approved during the Fifth Executive Committee meeting of APAARI at Bangkok, Thailand, and for 2002 being proposed is given in Annexure-III d for kind consideration and approval of the General Assembly.

**AGENDA ITEM No. 10 : Election of Executive Committee**

The General Assembly has to elect the Executive Committee for the biennium 2001-2002. Annexure-III e provides the list of past Executive Committees since the establishment of APAARI.

**AGENDA ITEM No. 11 : Sixth Executive Committee Meeting of APAARI**

The venue and date of the Sixth Executive Committee meeting are to be discussed and finalised during the General Assembly Meeting.

**AGENDA ITEM No. 12 : Any Other Item**



### Membership Fee Status as on August 2000

S. No.	Institution	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
1.	ACIAR - Australia			Rec.			Rec.	Rec.	Rec.	Rec.	Rec.
2.	AREEO - Iran	Rec.	Rec.	Rec.	Rec.	Rec.	Rec.	Rec.	Rec.	Rec.	
3.	BAR - Philippines		Rec.	Rec.	Rec.	Rec.					
4.	BARC - Bangladesh				Rec.	Rec.	Rec.	Rec.	Rec.	Rec.	
5.	COA - Taiwan									Rec.	Rec.
6.	DOA - Thailand	Rec.	Rec.	Rec.	Rec.	Rec.	Rec.	Rec.	Rec.	Rec.	Rec.
7.	ICAR - India	Rec.	Rec.	Rec.	Rec.	Rec.	Rec.	Rec.	Rec.	Rec.	Rec.
8.	JIRCAS - Japan						Rec.	Rec.	Rec.	Rec.	Rec.
9.	MAFF - Western Samoa	Rec.	Rec.	Rec.	Rec.			Rec.	Rec.	Rec.	
10.	MARD - Vietnam										Rec.
11.	MARDI - Malaysia	Rec.	Rec.	Rec.	Rec.	Rec.	Rec.	Rec.	Rec.	Rec.	Rec.
12.	MPIFC/KRS - Fiji	Rec.	Rec.	Rec.	Rec.	Rec.	Rec.	Rec.	Rec.	Rec.	
13.	NARC - Nepal				Rec.	Rec.	Rec.	Rec.	Rec.	Rec.	
14.	NARI - Papua New Guinea	Rec.	Rec.	Rec.	Rec.	Rec.	Rec.	Rec.	Rec.	Rec.	Rec.
15.	PARC - Pakistan	Rec.	Rec.	Rec.	Rec.	Rec.	Rec.	Rec.	Rec.	Rec.	
16.	PCARRD - Philippines	Rec.	Rec.	Rec.	Rec.	Rec.	Rec.	Rec.	Rec.	Rec.	
17.	RDA - Republic of Korea	Rec.	Rec.	Rec.	Rec.	Rec.	Rec.	Rec.	Rec.	Rec.	Rec.
18.	CARP - Sri Lanka	Rec.	Rec.	Rec.	Rec.	Rec.	Rec.	Rec.	Rec.	Rec.	Rec.

Rec ———> Received



## ASIA-PACIFIC ASSOCIATION OF AGRICULTURAL RESEARCH INSTITUTIONS (APAARI)


### Summary Statement 01 January – 31 December 1999 (Amount in US Dollars)

S. No.	Items	Received	Disbursements		Balance
			Budget	Actual Used	
	31/12/1998 Balance B/F, BKK Office and New Delhi Office:				468,993.51
1.	Membership Fee	100,140.13			
2.	Contributions	63,528.72			
3.	Interest Income	17,152.20			
4.	Other Income:				
	4.1 Miscellaneous Income	3,275.54			
	4.2 Profit and Loss on Transfer	5,066.00			
5.	Publications		25,000.00	10,963.45	
6.	APAARI Secretariat Support:				
	6.1 Secretary/IT Manager		50,000.00	15,437.05	
	6.2 Office Stationery & Postage		15,000.00	17,368.02	
	6.3 Miscellaneous		20,000.00	7,055.56	
7.	Consultancy/Travel/SSA		30,000.00	19,066.82	
8.	Training/Selected Research Projects/Network Support		40,000.00	10,340.00	
9.	Meetings			16,551.94	
	9.1 Expenses to Executive Committee Meeting				
	9.2 Expenses to General Assembly				
	<b>TOTAL</b>	<b>189,162.59</b>	<b>205,000.00</b>	<b>96,782.84</b>	<b>561,373.26</b>

\* The Exchange Rate in Bath: 1US\$ = 30.00

\* The Exchange Rate in Rupees: 1US\$ = 38.00

Amount in Fixed Account (US Dollars)	US\$ 507,777.52	
Amount in Saving Account (US Dollars)	US\$ 45,444.03	
Amount in Current Account (Bath: 19,616.74)	US\$ 653.89	
Cash in Hand (Bath 582.50)	US\$ 19.41	
Amount in Saving Account (Bath: 2,376.73)	US\$ 79.22	
Total in BKK Office		US\$ 553,974.07
Amount in Saving Account (Rupees: 424,009.89) New Delhi Office		US\$ 11,158.16
Grand Total		US\$ 565,132.23

  
 DR R.S. PARODA  
 Executive Secretary APAARI

  
 MS URAIRAT RUJIREK  
 Secretary & Accountant APAARI

  
 MS CHAVALIT SASANANAN  
 External Auditor



## ASIA-PACIFIC ASSOCIATION OF AGRICULTURAL RESEARCH INSTITUTIONS (APAARI)


### Summary Statement 01 January – 31 August 2000 (Amount in US Dollars)

S. No.	Items	Received	Disbursements		Balance
			Budget	Actual Used	
	31/12/1998 Balance B/F, BKK Office and New Delhi Office:				565,132.24
1.	Membership Fee	69,000.00			
2.	Contributions	52,986.78			
3.	Interest Income	11,747.69			
4.	Other Income:				
4.1	Miscellaneous Income	100.00			
4.2	Profit and Loss on Transfer	4,228.00			
5.	Publications		30,000.00	9,666.32	
6.	APAARI Secretariat Support:				
6.1	Secretary/IT Manager		60,000.00	22,908.78	
6.2	Office Stationery & Postage		20,000.00	11,399.70	
6.3	Miscellaneous		20,000.00	3,400.60	
7.	Consultancy/Travel /SSA		40,000.00	22,276.36	
8.	Training/Selected Research Projects/Network Support		45,000.00	2,758.67	
9.	Meetings		35,000.00		
9.1	Expenses to Executive Committee Meeting			482.57	
9.2	Expenses to General Assembly				
	<b>TOTAL</b>	<b>138,062.47</b>	<b>250,000.00</b>	<b>72,893.00</b>	<b>630,301.71</b>

\* The Exchange Rate in Bath: 1US\$ = 30.00

\* The Exchange Rate in Rupees: 1US\$ = 38.00

Amount in Fixed Account (US Dollars)	US\$ 518,594.03	
Amount in Saving Account (US Dollars)	US\$ 102,134.57	
Amount in Current Account (Bath: 19,616.74)	US\$ 484.99	
Cash in Hand (Bath 582.50)	US\$ 32.73	
Amount in Saving Account (Bath: 2,376.73)	US\$ 3,961.37	
Total in BKK Office		US\$ 625,207.69
Amount in Saving Account (Rupees: 424,009.89) New Delhi Office		US\$ 9,648.87
Grand Total		US\$ 634,856.56

  
DR R.S. PARODA  
Executive Secretary APAARI

  
MS URAIRAT RUJIREK  
Secretary & Accountant APAARI

  
MS CHAVALIT SASANANAN  
External Auditor



## ASIA-PACIFIC ASSOCIATION OF AGRICULTURAL RESEARCH INSTITUTIONS (APAARI)

### Proposed Budget for 2002 (US Dollars)

S. No.	Items	Approved 2000	Approved 2001	Proposed 2002
1	Publications (Newsletter, Directory, Technical Reports, etc).	30,000	30,000	30,000
2	APAARI Secretariat Support			
	i. Secretary/Information Technology Manager	60,000	60,000	45,000
	ii. Office Stationery and Postage	20,000	25,000	25,000
	iii. Miscellaneous Items	20,000	20,000	20,000
3	Consultancy/Travel/SSA	40,000	45,000	40,000
4	Training/Selected Research Projects/Network Support	45,000	45,000	45,000
5	Expert Consultation/General Assembly, Executive Committee meeting of APAARI (partial support)	35,000	40,000	40,000
		2,50,000	2,70,000	2,50,000

**Note:**

1. The above proposed Budget for the year 2002 is in line with that of years 2000 and 2001 Budget approved by the Fifth Executive Committee Meeting of APAARI held at FAO-RAP Bangkok, Thailand from November 29 – December 1, 1999.
3. For the Secretariat support, ACIAR has agreed to provide partial support of 30,000 Australian dollars per year for the years 1999, 2000 and 2001.



## ASIA-PACIFIC ASSOCIATION OF AGRICULTURAL RESEARCH INSTITUTIONS (APAARI)

### APAARI Executive Committee Since 1991

#### Executive Committee for 1991-1992

Chairman	:	Dr Md. Yusof bin Hashim	Malaysia
Vice-Chairman	:	Dr Keith W. Steele	New Zealand
Members	:	Prof. W. Lianzheng Mr C.R. Mahapatra Dr Maripaz I. Perez Mr Tubuola Tavita	China India Philippines Western Samoa
Executive Secretary	:	Dr R.B. Singh	India

#### Executive Committee for 1993-1994

Chairman	:	Dr Young Sang Kim	Korea
Vice-Chairman	:	Mr Balthasar M. Wayi	Papua New Guinea
Members	:	Prof. Wang Lianzheng Dr Zafar Altaf Dr William D. Dar Mr Montri Rumakom	China Pakistan Philippines Thailand
Executive Secretary	:	Dr R.S. Paroda	India

#### Executive Committee for 1995-1996

Chairman	:	Dr William D. Dar	Philippines
Vice-Chairman	:	Mr Abbas Keshavarz	Iran
Members	:	Dr Md. Sharif Bin Ahmad Dr Shiva Bahadur Nepali Dr Young Sang Kim Dr S.T. Semisi	Malaysia Nepal Korea Western Samoa
Executive Secretary	:	Dr R.S. Paroda	India

**Executive Committee for 1997-1998**

Chairman	:	Dr M. Akbar	Pakistan
Vice-Chairman	:	Dr Nobuyoshi Maeno	Japan
Members	:	Dr Z. Karim Dr Ananta Dalodom M. J. Kumar Dr William D. Dar	Bangladesh Thailand Fiji Philippines
Executive Secretary	:	Dr R.S. Paroda	India

**Executive Committee for 1999-2000**

Chairman	:	Dr Ian Bevege	Australia
Vice-Chairman	:	Dr Ananta Dalodom	Thailand
Members	:	Dr Seong-Hee Lee Dr K.A. Malik Dr R.D. Ghodake Dr D. Kirtisinghe	Republic of Korea Pakistan Papua New Guinea Sri Lanka
Executive Secretary	:	Dr R.S. Paroda	India





## ASIA-PACIFIC ASSOCIATION OF AGRICULTURAL RESEARCH INSTITUTIONS (APAARI)

### ICT Expert Consultation : Brief Report 6-7 November 2000, Chiang Rai, Thailand

Twenty seven participants attended this meeting of which 12 were the Information Nodal Points of the Asia-Pacific NARS, 8 from sub-sector and key players in ARD information management and 7 others from APAARI Staff and Observers. The proceedings of this meeting will be made available separately.

The proposed strategy was presented in the second session of which the elements were: Organizational Development - Needs assessment, strengthening communication; Mandate - Manpower Planning (NARS) and capacity building planning; Infrastructure for knowledge and information exchange - APAARI website and linking this to NARS Websites and Databases; and Regional Database - contacts databases (and other databases) developed by APAARI. The plenary session considered it important to agree on the scope of the RAIS as a framework for consideration of the operational elements. It was stressed that the RAIS be inclusive rather than exclusive and that it should focus on the need of agricultural research (*i.e.* in the broad sense) for development rather than on Agriculture per se. A proposal to change from a "RAIS" to "APARIS", the "Asia Pacific Agricultural Research Information System" was adopted. The working groups of the technical sessions used this strategy document and other materials presented during the consultation as the basis for their discussions which focussed on: HRD and organizational management capacity; Regional information resources and databases; Regional information system as a gateway; and organization and management of the regional system. The working groups considered issues, options, work plans and recommendations. Working group reports to plenary generated further clarifications and additions, which have been incorporated in the formulated synthesis below.

### Major Outputs and Highlights

#### *HRD and Organizational Management*

- Needs assessment for IT/IM: APAARI to collect information on methodologies being used by NARS; facilitate exchange and develop appropriate methods for sub-regional needs and information assessments on such needs to be posted on the APAARI website.
- Webpage development: APAARI to encourage NARS to hot link to APAARI and other sites, and to provide guidelines for NARS on webpage design to enhance their regional use.
- Support to NARS for developing their ICT functions - recognizing the limited capacity in APAARI and the well developed state of ICT skills and management in the larger NARS.
- APAARI could provide a clearing house mechanism to facilitate information flow among APARIS partners on where and how to get advice on ICT.

- APAARI to assemble and distribute training materials, develop and maintain a database on training courses etc. and back stop training events including distance learning in ICT specialist training and training of trainers at sub-regional level.
- It was agreed that APAARI's role was as a facilitator, not as the advocate neither for ICT nor to undertake an operational role in ICT planning and management in support of NARS. In developing APARIS work programme in this area, it will be important to consider resources issues, time for implementation, to prioritize actions and mobilize appropriate expertise across the system for implementation.

### ***Data Bases and Information Resources***

- The existence of numerous databases at national, regional and global levels was recognized. Therefore APAARI needs to set criteria for linking to them and be very selective because of cost considerations. Databases should remain operative at national level where possible and only become part of the regional system where they add value at that level; APAARI should work in partnership with like minded organizations in developing APARIS.
- In creating its own databases, APARIS should build on what exists and not duplicate efforts that are made by others to generate the same type of databases; a meta-system rather than primary system approach is most appropriate.
- Important policy issues in database management include confidentiality, IPR and quality assurance. Guidelines for database content, protocol format should be developed as APARIS standard, and existing software used wherever possible.
- Linking to existing regional databases held by regional organizations such as APAFRI, NACA, APHCA should be a component of the APARIS.
- There is potential to accommodate interactive models into APARIS *e.g.* E-conferencing discussion groups.
- Databases development within APARIS needs to give highest priority to institutional information and promulgation of "success stories"; next priority should be for information on training opportunities, conferences, etc. and meta databases on regional/sub-regional networks and scientist databases.
- Finally as resources permit, APARIS might consider establishment of a reference centre for publications; this should be done in cooperation with FAO and CABI.

### ***APARIS as a Gateway***

Gateway is "A resource which identifies key internet resources of relevance to the region; it is a navigational tool for managing information on the internet, of relevance to the region and within the scope of APARIS, and provides a meta database of targeted internet resources".

Several issues need to be considered in establishing and managing a gateway function including:

- The role of nodal points or country level coordinators (INPs)
- How will the gateway perform as a regional gateway into NARS and for NARS
- Unity of approach – user friendly perspective to a range of users with varying needs and skills
- Technical requirements and search engine
- Standards, evaluation and policy issues
- Capacity to establish and maintain – cost and sustainability issues

The plenary considered the proposal worthy of serious consideration by APAARI as a functional unit of APARIS. To this end it recommended that a feasibility study be conducted for establishment and management of a gateway function in APARIS. FAO and CABI agreed to cooperate with APAARI

in this activity and assist in identification of funding support; the study should be conducted by an information scientist from one of the participating NARS, if possible.

## **Organization and Management of APARIS**

A strong consensus developed during discussion that APARIS should be an APAARI facilitated activity in partnership with other regional stakeholders relevant to the scope as agreed. APAARI has evolved into an effective regional forum and this should enable a widening partnership base with time.

It was important to recognize that whatever system was developed it must be sustainable with currently identifiable resources of manpower and financing, and should progressively develop in harmony with any expansion resource availability. Some activities within APARIS lend themselves to in-kind support of participating stakeholders while others might be conducted in project mode with donors or other external support.

In this context, identification of an APARIS coordinator is a critical and immediate issue, should APAARI adopt APARIS as its preferred way of moving forward; current ICT capacity in APAARI is committed and limited, and cannot take on this role without supplementation. However, the APAARI website provides an ideal platform from which to launch APARIS.

Given the fundamental importance of information and knowledge exchange and the increasing level and sophistication of activity, including NARS, APAARI must demonstrate its utility to others if it is to be effective. It cannot do this on a shoestring budget. Hence, while initially APARIS may have small beginnings, a strategic view must be taken of on-going needs and developments and how APARIS can be most effective and add value, in rapidly changing environment for which resources are essential.

In order to advance the proposal to establish APARIS under the aegis of APAARI, the following is proposed:

- The ICT expert group from NARS and regional organizations as convened for this consultation should form a **steering group** to enable APARIS and determine its structure, guidelines and work programme.
- An **APARIS support group** be constituted comprising, APAARI, FAO, GFAR, CABI, IARC (representative), which will be responsible for raising resources from donors – there should be a link between the two groups by representative of the steering group on the support group.
- TOR for these two groups should be prepared and their membership confirmed.
- APARIS proposal should be prepared as a project activity identifying elements which can be undertaken by the partners (including APAARI) and those for which donor support will be sought. This proposal should subsume the current KISS proposal of APAARI earlier referred to as its element parallel to that proposed for APARIS.
- Discussions should be held with organizations which might be prepared to provide coordination to support APAARI for APARIS, at least in the initial stages.



## ASIA-PACIFIC ASSOCIATION OF AGRICULTURAL RESEARCH INSTITUTIONS (APAARI)

### Networks: Brief Report

#### CORRA

Dr Ronald P. Cantrell, Director General, IRRI, apprised on the deliberations of the Fourth Annual Meeting of CORRA held from 6-7 November, 2000 prior to APAARI Consultation meeting. This was attended by CORRA members, NARS participants, APAARI and IRRI staff. The meeting discussed the past issues and new emerging concerns; the need to further strengthen INGER's role and activities, CORRA PVP initiatives, increased public awareness, access to rice research through web-based technology, work on functional genomics. Issues for the next CORRA meeting were highlighted, namely, water management, mechanized and precision farming, functional genomics and genetic transformation and continued interest in INGER.

#### TAMNET

The progress report of Hybrid Maize Research activities in the Asian region through Tropical Asian Maize Network (TAMNET) was made available to all participants. The members were informed that Dr S.K. Vasal, Team Leader of the Asian Maize Programme could not attend the meeting as he was away to USA to receive the World Food prize. The report presented activities on coordination of hybrid trials, new research initiatives to distribute/supply early generation to maize researchers in the region to accelerate inbred lines development efforts, inbred lines evaluation resources, made available in 1999. Fifty yellow and fifty white lines of maize inbreds were made available to public and private institutions for accelerating hybrid maize research activities/training and capacity building in hybrid maize technology and seed production, and public awareness through TAMNET Newsletter and publication of success stories on NARS-collaborated achievements by APAARI. Future strengthening of TAMNET role to accelerate hybrid maize research and development, such as dissemination of early and QPM CIMMYT developed hybrids.

#### RWC

Dr R.K. Gupta, Facilitator, Rice Wheat Consortium (RWC), CIMMYT briefed on the achievements of the Consortium partners in fostering the development of resource conservation technologies appropriate to Indo-Gangetic Plains in enhancing productivity and sustainability of the rice wheat system; adoption of zero-tillage technologies in more than 20,000 ha in India and Pakistan; reduced tillage, surface seeding, bed planting and the associated agronomic practices. Overall successes achieved in programmes in operation in South Asia, namely in Bangladesh, Nepal, India and Pakistan, were highlighted.

#### CLAN

Dr C.L.L. Gowda, Coordinator, CLAN, ICRISAT presented an update on Cereals and Legumes Asia Network activities (CLAN). CLAN is a network of the NARS facilitated by ICRISAT for priority crops:

sorghum, pearl millet, chickpea, pigeon pea and groundnut. Its core members are Bangladesh, China, India, Indonesia, Iran, Myanmar, Nepal, Pakistan, Philippines, Sri Lanka, Thailand, Vietnam and Yemen; other partners are also involved as per their interest. He referred to the breeding material provided in the 5 mandate crops to member countries for evaluation in local selection for special trials particularly the Asian Regional Sorghum Variety Adoption Trial and the Asian Regional Groundnut Variety Nursery. Based on ICRISAT-supplied material, several varieties have been released in chickpea and groundnut. He pointed to human resource development wherein 185 NARS scientists and technicians were associated in such activities conducted at ICRISAT, and also the training courses organized. Activities on similar lines are being proposed for 2001 in collaboration with CLAN Country Coordinators. He emphasised on the commitment of member countries to network activities and that both ICRISAT and APAARI have provided support to ensure that network remains dynamic.

### **GoFAR**

Dr Rafael D. Guerrero III, represented the Group on Fisheries and Aquatic Research (GoFAR). GoFAR is a forum where all the NARS, other networks and national/international organizations could interact on R&D aspects and the programmes in regional context, with ICLARM coordinating the group. The need for regional collaborative research was emphasised to address common problems/constraints keeping in view both regional and national priorities. ICLARM plans to organize a workshop in March 2001 to discuss capacity building/training on the research priority setting and successful partnerships in aquatic resources management.

### **ICUC/UTFANET**

Dr N. Haq, Director, International Centre for Underutilized crops (ICUC) briefly dealt with "ICUC's activities in Asia and Opportunities for further collaborative research on underutilized crops". The highlights on ICUC's Research and Development activities in improvement of tropical fruits through the Underutilized Tropical Fruits in Asia Network (UTFANET). Countries participating include Bangladesh, India, Indonesia, Nepal, Pakistan, Philippines, Sri Lanka, Thailand and Vietnam; China has now agreed to join the network. UTFANET Coordinator's office is located at PCARRD, Philippines. Its 3-year (2000-2003) workplan stresses R&D in participatory activities, characterization of jackfruit, pummelo and mangosteen, propagation and distribution of planting material, and human resources development. Diversity of jackfruit and pummelo has been studied in Bangladesh and Nepal, and germplasm collection and evaluation in jackfruit, pummelo and mangosteen have been made. The Bangladesh Council of Scientific and Industrial Research (BCSIR) has through ICUC funded project developed products from jackfruit under 'Fruits for the future project' of ICUC in collaboration with IPGRI and ICRAF. Monographs on tamarind and *Ziziphus* are being completed. Other work includes homestead farming in Bangladesh and sunflower improvement in Pakistan, database enhancement on underutilized crops, publications including UTFANET Newsletter, and organizing workshops/conferences/training. ICUC in collaboration with FAO has formed Underutilized Traditional Vegetables Asia and the Pacific Network (UTVAPNET).



