The Fifth General Assembly of APAARI and 
Expert Consultation on 
Research Management Mechanisms of 
National Agricultural Research Systems (NARS) 
13-15 October 1998, Suwon, Republic of Korea 
PROCEEDINGS
THE FIFTH GENERAL ASSEMBLY OF APAARI
AND
EXPERT CONSULTATION ON RESEARCH MANAGEMENT MECHANISMS
OF
NATIONAL AGRICULTURAL RESEARCH SYSTEMS (NARS)

13-15 October 1998

Suwon, Republic of Korea
(Co-sponsored by ACIAR, ISNAR and FAO)

PROCEEDINGS

ASIA-PACIFIC ASSOCIATION OF AGRICULTURAL RESEARCH INSTITUTIONS
FAO Regional Office for Asia & The Pacific, Bangkok
Signing of MoU between APAARI and IPGRI

Dr. Kim Kang-Kwan releasing APAARI Success Stories – ‘Groundnut in China’ and ‘Direct Seeded Rice in Malaysia’

Participants visiting the RDA Museum
PREFACE

Asia-Pacific Association of Agricultural Research Institutions (APAARI), since its establishment, has played a very effective role in increasing co-operation and collaboration among the National Agricultural Research Systems (NARS) in this region. At its Executive Committee/General Assembly Meetings it had been organizing Expert Consultations/Workshops addressing specific issues, often focusing on common but very important National/Regional agricultural problems and thereby providing increased awareness and strengthening mutual relationship among the stakeholders.

Over the last two decades or so, several changes have taken place in the organizational and functional set-up of NARS and in their research and development programmes. Commensurate to these, there has been no proper emphasis towards development of management skills of the senior scientific staff to make national research programmes more efficient and effective. As R&D activities are time bound, and lay high priority to meet challenges such as poverty alleviation, food and nutrition security, natural resource conservation and overall sustainable development of agriculture; efficient managers are required to head such programmes. Thus, a need was felt that APAARI should organise an 'Expert Consultation on Research Management Mechanisms of National Agricultural Research Systems (NARS)'. Accordingly, this consultation was organised in conjunction with the Fifth General Assembly Meeting of APAARI at Suwon, Republic of Korea, 13-15 October 1998.

The consultation provided good opportunity to the APAARI members to discuss the needs of the NARS in O&M capacity building and addressing various issues and challenges faced by NARS such as in priority-setting, strategic planning, HRD needs, sharing management experiences and impact evaluation and assessment, and also the need to link research to organizational and financial management, with involvement in research programme planning/governance of different stakeholders including private sector, NGOs and farmers.

These proceedings highlight the deliberations of this Expert Consultation meeting wherein many of the above mentioned issues could be discussed, crystallized and recommended for a follow-up action. It is felt that this publication will be useful not only to the APAARI member countries/NARS in this region but to other organizations as well.

We are grateful to the Australian Centre for International Agricultural Research (ACIAR) and the International Service for National Agricultural Research (ISNAR) for their financial support to organize this Consultation and the General Assembly meeting and to FAO RAP, Bangkok and FAO, New Delhi, for their secretarial/logistic support; and to the Rural Development Administration, Suwon, Republic of Korea for hosting this event successfully. We are also thankful to all the members, associate members and the Fisheries Sub-Group, and the CORRA participants for their contributions to the success of this meeting.

(R.S. Paroda)
Executive Secretary
APAARI
# CONTENTS

Preface i  
Contents iii  
INAUGURAL SESSION 1  

## PART-I

---

<table>
<thead>
<tr>
<th>Session</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Managing NARS-International Initiatives</td>
<td>3</td>
</tr>
<tr>
<td>II</td>
<td>Managing National Initiatives</td>
<td>5</td>
</tr>
<tr>
<td>III</td>
<td>Network Initiatives</td>
<td>7</td>
</tr>
<tr>
<td>IV</td>
<td>Group Discussion on Addressing the Challenges</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Setting Strategic Directions</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Human Resource Development</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Sharing Management Experiences</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Impact Assessment and Evaluation</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Recommendations</td>
<td>11</td>
</tr>
</tbody>
</table>

## PART-II

**Fifth General Assembly of APAARI**  
---

<table>
<thead>
<tr>
<th>Agenda Item No. 1</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Welcome by Executive Secretary</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>Address by the Chairman</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>Action Taken Report</td>
<td>18</td>
</tr>
<tr>
<td>a)</td>
<td>Publication of the Newsletter</td>
<td>19</td>
</tr>
<tr>
<td>b)</td>
<td>Publication of Success Stories</td>
<td>19</td>
</tr>
<tr>
<td>c)</td>
<td>Mailing List</td>
<td>19</td>
</tr>
<tr>
<td>d)</td>
<td>Proceedings of the Fourth Executive Committee Meeting and Report on Status of Genetic Resources in the Asia-Pacific Region</td>
<td>19</td>
</tr>
<tr>
<td>e)</td>
<td>APAARI Representation in Regional Workshop</td>
<td>20</td>
</tr>
<tr>
<td>f)</td>
<td>Circulation of NARS Publications</td>
<td>20</td>
</tr>
<tr>
<td>g)</td>
<td>creation of a Homepage on Internet</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>APAARI Expert Consultation</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Additional APAARI Activities</td>
<td>20</td>
</tr>
<tr>
<td>a)</td>
<td>Fisheries Sub-Group Meeting</td>
<td>20</td>
</tr>
<tr>
<td>b)</td>
<td>ICRISAT-ICARDA-APAARI Proposal to Support CLAN</td>
<td>21</td>
</tr>
<tr>
<td>c)</td>
<td>MoU between ASPNET and APAARI</td>
<td>21</td>
</tr>
<tr>
<td>d)</td>
<td>APAARI's Participation in GFAR</td>
<td>21</td>
</tr>
<tr>
<td>e)</td>
<td>Supporting UTFANET</td>
<td>21</td>
</tr>
<tr>
<td>f)</td>
<td>INIBAP-PROMUSA Steering Committee</td>
<td>21</td>
</tr>
<tr>
<td>g)</td>
<td>Information Strengthening by ISNAR and CABl</td>
<td>22</td>
</tr>
<tr>
<td>h)</td>
<td>MoU with IPGRI</td>
<td>22</td>
</tr>
</tbody>
</table>
Agenda Item No.6 : APAARI Secretariat
Recruitment of a Technical Officer 22

Agenda Item No.7 : Membership and Financial Status 22
   a) Membership 22
   b) Payment 23
   c) Financial Status 23

Agenda Item No.8 : Action Plan for 1990-2000 23
Agenda Item No.9 : Budget for Biennium 1999-2000 23
Agenda Item No.10 : Sixth General Assembly and Fifth Executive Committee Meeting 24
   a) Sixth General Assembly 24
   b) Fifth Executive Committee Meeting 24
Agenda Item No.11 : Election of the Executive Committee 1999-2000 24

ANNEXURES
Annexure-I : Programme 25
Annexure-II : List of Participants 29
Annexure-III : Agenda 37
Annexure-IV : Agenda Notes 38
   Annex IV-a : ToR of the Technical Officer 44
   Annex IV-b : Membership Fee-Status as on 15 September 1998 45
   Annex IV-d : Status of Contribution Received as on 15 September 1998 47
   Annex IV-f : Executive Committees 1991-98 49

APPENDIX-I
Suwon Meeting of Fisheries and Aquatic Resources Research Managers: Report to APAARI 50
   Appendix-I/Annexure-I : Regional Priorities in Research, Capacity Building and Linkages among NARS 55
   Appendix-I/Annexure-II : List of Participants 57

13-15 October 1998

Suwon, Republic of Korea

(Co-sponsored by ACIAR, ISNAR and FAO)

INAUGURAL SESSION

The Fifth General Assembly of the Asia-Pacific Association of Agricultural Research Institutions (APAARI) was held at Suwon, Republic of Korea from 13-15 October 1998, in conjunction with the Expert Consultation on Research Management Mechanisms of NARS. It was co-sponsored by ACIAR, ISNAR and FAO. Two more meetings were also organized with it, namely, the Fisheries Sub-Group meeting in collaboration with ICLARM on 11-12 October 1998 and the CORRA (Council for Partnership on Rice Research in Asia) second annual meeting in collaboration with IRRI on 16 October 1998.

The meeting was chaired by Dr. M. Akbar, Chairman, APAARI Executive Committee and co-chaired by Dr. Nobuyoshi Maeno, Vice-Chairman. Dr. Kim Kang-Kwun, Administrator, Rural Development Administration, Republic of Korea was the Chief Guest at the Inaugural Session. Dr. M. Akbar in his inaugural speech stressed on the collaborative role of APAARI in the Asia-Pacific region to promote and strengthen NARS. He referred to the heterogeneity among NARS and the need for partnership and linkages.

Dr. R.S. Paroda, Executive Secretary, APAARI welcomed all the participants and dignitaries and expressed APAARI's gratitude to the Rural Development Administration, Republic of Korea, for hosting the meeting. He pointed out the role of APAARI in promoting agricultural research and development in the region and highlighted the achievements made in co-ordinating NARS activities and bringing out various publications. He referred to the changing scenario of R&D in agriculture and problems being faced by NARS in research execution and management and stressed that the Expert Consultation will discuss elaborately the issues, approaches and possible remedial measures to strengthen NARS of this region.

Dr. Stein W. Bie apprised the role of ISNAR in strengthening NARS activities and the overall role of CG Centres in promoting national/regional activities. He stressed ISNAR's supportive role to interact with regional fora such as APAARI, and the current efforts to develop an information system for APAARI. Mr. Ian Bevege referred to ACIAR's collaboration with APAARI and support to its activities, and reflected on the need for such regional as well as international (IARCs/CGIAR/GFAR) co-operation in the Asia-Pacific region for the benefit of NARS.
Dr. Kim Kang-Kwun, Administrator, Rural Development Administration, Republic of Korea, in his inaugural address welcomed all the participants, and highlighted the importance of APAARI as a regional forum to enhance collaboration and partnership among the NARS of the region. He referred to the previous meetings and the successes achieved, and stressed the need to discuss important issues relating to research management. He referred to more collaboration among NARS of the region.

Dr. Nobuyoshi Maeno thanked Dr. Kim and his staff for the arrangements to hold this meeting and to the Director Generals’ of IARCs and the officials of NARS represented, for their participation in this important meeting.

The General Assembly and the Expert Consultation was attended by 13 NARS members of APAARI, namely Australia, Fiji, India, Iran, Japan, Malaysia, Pakistan, Papua New Guinea, Philippines, Republic of Korea, Sri Lanka, Thailand and Western Samoa. Other NARS present included Myanmar, Taiwan and Vietnam. International Organizations included IARCs which are associate members such as ICRISAT, IRRI, IPGRI, ISNAR, ICARDA, ICLARM, CIP and CIMMYT; AVRDC and the FAO. The Global Forum on Agricultural Research (GFAR) had representation of both GF-SC and NARS-SC operating presently from ESDAR/the World Bank, Washington and the SDRR Division in FAO Rome. In all, 45 participants attended this meeting, including 12 from the Fisheries and Aquatic Group. The details of the programme and the list of participants are given in Annexures I and II, respectively. Summary of the proceedings of the Expert Consultation is presented in Part-I, and of the General Assembly in Part-II.
The deliberations of the Expert Consultation on Research Management Mechanisms of the National Agricultural Research Systems (NARS) was held in four Technical Sessions: Session-I dealt with International Initiatives, Session-II with National Initiatives, Session-III with Network Initiatives, and Session-IV had Group discussions on addressing some of the challenges faced by NARS such as setting priority directions, sharing management experiences, human resource development and impact assessment and evaluation. The Plenary Session was chaired by Dr. R.S. Paroda, facilitated by Dr. B.P. del Rosario when specific recommendations were endorsed.

Brief deliberations of each session are given in this report:

**Session I: Managing NARS—International Initiatives**

This session was chaired by Dr. Ron Cantrell, Director General, IRRI, who laid stress on the role of both the public and the private sector, need for complementarity, and for developing strong national programmes. The session had presentations on diverse approaches to make the NARS both stronger and efficient.

Dr. Stein W. Bie highlighted the ISNAR experience on changes taking place within NARS. He pointed out that food security, nutritional balance, sustainable development and natural resource management would continue to be the basic goals of research priorities of different NARS, and the need to assist NARS in their restructuring to meet emerging challenges—farmers' role, globalization in agriculture, and trade liberalization. Focus has to be on agricultural research results for farmers' benefits. There is also a need to study the effort of globalization in the Asia-Pacific region. All ARIs' and NARS need to retool themselves to address the changing needs and dimensions related to globalization, comparative advantages, intellectual property rights, market responses, biotechnology and information technology advances, public versus private research, participatory research, access to information etc.

Dr. Alain Derevier and Mr. Christian Hoste provided details concerning the Global Forum on Agricultural Research (GFAR) and outlined the activities of the GFAR-SC and NARS-SC, respectively. The activities of the GF Secretariat include institutional development, information and communication/dissemination at global level through the Electronic Global Forum on Agricultural Research (EGFAR), promote development of research partnerships, provide technical guidelines and overall coordination as a facilitator. The NARS Secretariat will also stress on developing better information management system, to assist regional fora and the sub-regional fora, promote national research management and global linkages such as these with CG institutions and other Global initiatives. Greater co-ordination between APAARI and GFAR: GF-SC and NARS-SC; and participating in strengthening of the NARS activities and in developing Asia-Pacific regional fora was envisaged through regional priority-setting, focus on sub-regional needs, involving/collaborating with other
countries/NARS. A much wider role of APAARI was stressed as a regional forum to collaborate with NARS-SC, and to facilitate and promote the above activities.

Dr. Stein W. Bie pointed out the role of ISNAR in developing APAARI Web-site (homepage), which will facilitate access of APAARI members in receiving, providing and sharing worldwide information. He informed that ISNAR was pursuing ADB's support for funding the proposed information technology network for APAARI, which will allow research information to be interactively available to members of APAARI, including the creation of E-mail discussions.

Dr. Meryl J. Williams presented the activities of the Group on Fisheries and Aquatic Research (GoFAR) in strengthening research activities on fisheries in collaboration with APAARI, and dealt with the deliberations of the meeting jointly organized by ICLARM and APAARI on 11-12 October 1998, with support from AusAID and ACIAR. Highlights of the meeting included: i) discussions on the status of aquatic resources, constraints to development and research priorities of various participating countries; ii) identification of priority areas for regional collaboration in research and capacity building; and iii) formation of Group on Fisheries and Aquatic Research (GoFAR). Concern was expressed on the decline in fisheries reserves due to over-exploitation of major world stocks, degradation of aquatic habitats by land based activities, uncertain sustainability of agricultural production, developing aquatic biodiversity especially in fish waters and role of technical support from national, regional and international agencies for agriculture and fisheries research development and extension services. The mechanisms in promoting aquatic resources research were discussed and the meeting recognized that regional research collaboration would benefit all countries, organizations and networks by exchange of information, knowledge, technology sharing, expertise and facilities such as in diverse organizations, facilitating linkages, developing mechanisms for coordination and addressing issues regionally, and the need to coordinate activities with fisheries and aquaculture research. The GoFAR (Group on Fisheries and Aquatic Research) was identified to provide major thrust in regional coordination based on priorities for research and capacity building, and in developing linkages among NARS and other partners. Identified research activities included addressing gender issues in fisheries and aquaculture, wider management for grass carp production, institutional strengthening, priority-setting, integrated management of indigenous species and mangrove friendly aquaculture, intersectoral linkages in agriculture, livestock and fisheries. GoFAR was officially incorporated into APAARI with ICLARM as the focal point, and Dr. Williams suggested the need to hold its meetings in conjunction with APAARI's annual meetings.

During discussions, several points came up. Dr. Paroda was highly appreciative of the efforts made by ISNAR to facilitate information communication through a homepage for APAARI and thanked Dr. Stein W. Bie and his staff. The members expressed great interest in the new initiatives through GoFAR for sub-regional/regional fora and strengthening of NARS. Wider circulation of APAARI Success Stories was suggested through NARS-SC. Dr. Gowda pointed out that overlapping of activities of NARS-SC and GF-SC may be avoided, and focus should be more on complementarities/partnership-mode. Mr. Bevege suggested interaction with other organizations for forestry programmes. He also expressed concern on priorities and needs of sub-regional fora. Dr. Paroda thanked Dr. Meryl J. Williams for organizing the Fisheries Sub-Group meeting so successfully and generating consensus for establishing GoFAR.
Session II: Managing National Initiatives

This session was chaired by Dr. Stein W. Bie. Dr. R.S. Paroda presented the Secretariat Paper on “Major Management Issues Facing NARS – a Case Study of ICAR”. This case study was taken particularly to provide SWOT analysis of a developing country NARS within the region with varied experiences.

Dr. R.S. Paroda pointed out that NARS over the past few decades, have addressed the major problems of food production and their efforts are diverted towards poverty alleviation, achieving economic growth and natural resources management. Dr. Paroda referred to the evolution of NARS in the Asia-Pacific Nations, and on the prevalent models in the organization of NARS in the region; such as the Agricultural Research Council Model (ARC), National Research Institute Model (NRI) and the Agricultural University Model (AU/SAU). He emphasised on various key issues facing NARS, and projected the way out to achieve desired objectives and goals considering their strengths, weaknesses, opportunities and threats. Dr. Paroda stressed that though the NARS are at various stages of growth and development, investment in agricultural research and more organized structure of research and education have helped various nations in meeting their food needs. However, commensurate to NARS programmes, resource crunch exists and also they have problems of organization and management affecting adversely their effectiveness and efficiency. Required attention is, therefore, needed to build management skills to improve/strengthen NARS output and efficiency. He further addressed the need for human resource development, information system development, policy planning, monitoring, evaluation, research prioritization, programme coordination, linkage with international scientific institutions/organizations, and in-house exercise to bring in the needed O&M Reforms to have better efficiency and visibility.

Dr. Paroda stressed the need for NARS towards meticulous planning and prioritization, a sharper focus on public funding for research on public goods, complementary role of public and private sectors, resource generation, mobilization, and efficient utilization of available resources, more involvement of stakeholders in research governance, priority-setting, research execution and evaluation, innovations in technology transfer involving farmers, development departments, NGOs, private sector in a variety of formal and informal ways such as Research-Extension-Farmer linkages. He thus focused on the overall concern and challenges to meet the emerging requirements of agricultural research, education and development for strengthening NARS of this region. He outlined NARS vision as a fully autonomous, efficient, effective, caring and financially sustainable organization, achieving the goals of household food and nutrition security, economic welfare and sustainable use of natural resources.

Dr. Beatriz P. del Rosario presented an overview of the national agricultural resources research and development system (which is a broadened NARS) within the Philippine Council for Agriculture, Forestry and Natural Resources Research and Development (PCARRD) under the Department of Science and Technology (DOST). Dr. Rosario outlined the organizational structure of PCARRD, and that the Council was involved in a whole range of research, education, development-oriented activities and policy-making exercise concerned with national and regional development. Emphasis is being laid to find the solutions to the problems of farmers and other end-users so that closely-linked research and extension system operates, and interaction between and among the different stakeholders included in agricultural and resource R&D is maintained. Dr. Rosario referred to the National Agricultural and Resources Research and Development Network (NARRDN) which
is coordinated by PCARRD. She explained the role of the various national and regional R&D centres, cooperating centres and specialized agencies, the priority-setting and resource allocation for research and development, and the strategic partnership with international organizations.

Dr. Rosario emphasised on the major accomplishments towards food security, enhancing R&D activities, technology transfer and promotion. Future challenges are focused on further economic growth and sustainable development, increased role of environmental protection, human resource planning, development and management, role of strengthening information technology and concern on policy issues.

The above presentations pointed out that most of the NARS are facing second generation problems of agricultural research management such as priority-setting mechanisms, organizational and financial management, decentralization, developing effective linkages with public sector institutions, private sector, NGOs, farmers and other stakeholders in research governance and evaluation. NARS infrastructure needs to be modernized and competent human resource is required to manage both research and management. Increased research investment and accountability was necessary, correlated with the benefit accruing from research.

The presentations generated good discussions and the sharing of experiences among the NARS participants. Dr. M. Taeb expressed concern on the linkages between research institutes and clients, and efforts being made to improve these linkages. Dr. Paroda reiterated that results of research programme must be transferred to the stakeholders. Tools for transfer are lab-to-land, demonstration plots, operational research and distant education. Also researchers are encouraged to have direct contacts with the farmers in the target areas, allowing upto 20% of their time. Dr. Rosario pointed out that in the Philippines, research is conducted by centres under the Ministry of Agriculture whilst extension is the responsibility of the Provincial governments. Researchers thus direct the transfer of their research directly to them and to interest groups for cash crops such as mango and coconut. Dr. Sharif Bin Ahmad said that in Malaysia it is expected that the Government provides the infrastructure and that the Ministry of Agriculture will do research based directly on client needs, keeping in view the crops and the size of their enterprises.

Dr. Derevier inquired as to how the budget is framed - its size, allocation etc. Dr. Paroda explained the role of the Planning Commission and the involvement of the Ministry of Finance in allocating funds to the ICAR.

Dr. Sharif Bin Ahmad inquired as to how the research topics are decided and how to segregate perceived needs and the real needs of the clients. Dr. Paroda clarified that this is attempted through a consensus wherein the researchers, extension officers and farmers together decide the priorities to be pursued. Dr. Rosario also endorsed Dr. Paroda’s views, but expressed the difficulties being faced in identifying representatives for groups such as farmers, NGOs etc. A careful exercise is required to find out true partners.

Concluding the lively discussion, Dr. Stein W. Bie remarked that although the pathway to client-oriented research might differ among countries, there appears to be a strong desire by the administrators of such research, to select research issues of greatest relevance to the target groups, and to ensure that efficient pathways exist for transferring research results.
Session III: Network Initiatives

The Chairperson Dr. Meryl J. Williams opened the session by re-emphasising the importance of networks in the APAARI region. The success achieved through networks such as TAMNET, CLAN and IPGRI (PGR network) were then addressed by the concerned experts.

Dr. S.K. Vasa presented the report on the work of TAMNET, giving a brief historical description. The activities undertaken include operating the coordinated field trials, publishing the newsletter and success stories and providing training. During 1997/98 season, new initiatives were started. These included periodic announcement of new inbred lines, distribution of selfed progeny bulks, inbred evaluation trials, refresher courses in hybrid maize technology and seed production and sponsoring participation in scientific meetings and symposia. There was active participation of private sector in the evaluation of hybrids and inbred lines and this sector also contributed funds. Through TAMNET, the participating countries appreciated new initiatives and appeared to have benefitted from the material, information and training provided. The value of in-country training courses was emphasised.

Dr. C.L.L. Gowda presented the activities of CLAN. He discussed the objective of the network and stressed its cost-effectiveness for research and technology exchange amongst Asian countries for ICRISAT/ICARDA mandate cereals and legumes. An overview of the membership, coordination, and the activities was presented and a few examples were given. The importance of working groups to solve specific problems was emphasised because it enhanced complementarity amongst the collaborating scientists. Increasing leadership role was being assumed by the NARS scientists. Referring to the new phase of CLAN, Dr. Gowda indicated that, as recommended by APAARI, a new proposal including lentil as an important legume crop, has been jointly submitted by APAARI, ICARDA and ICRISAT for financial support to IFAD. This proposal is in response to the need for greater incorporation of legumes in the farming systems so as to enhance sustaintability of the production system. The activities would include running joint regional trials, exchange of germplasm, information exchange and human resource development.

Dr. Ken Riley presented the network activities on plant genetic resources supported by IPGRI-APO. The sub-regional networks included (a) South-East Asia RECSEA-PGR, (b) East Asia-EAPGR, (c) South Asia-SANPGR, and (d) Pacific Network. These networks were very cost effective and permitted attention to be paid to selected key issues. He referred to an important regional network activity being planned - a joint FAO-CGIAR-APAARI sponsored meeting on the implementation of the Global Plan of Action (GPA), to be held in Manila, Philippines, during December 1998. The crop networks include COGNET, Tropical fruits, Sweet Potato Network (ANSWER), Sesame network, Buckwheat network, Lathyrus Network and good progress has been made in each of these. For example, based on the Lathyrus network meeting held in December 1997 at NBPGR, ICAR, New Delhi, work on developing a catalogue on Lathyrus genetic resources has been initiated. With the development of new low-neurotoxin lines of Lathyrus from ICARDA and other programmes, the stage was all set for greater sharing of the material and information on the crop. IPGRI and APAARI are going to sign a memorandum of understanding which would facilitate exchange of germplasm in the region, particularly for those crops which are not being attended to by IARCs.
The discussion generated much interest from the participating NARS. There was a query on policy related issues regarding the distribution of maize material under TAMNET network. Dr. Vasal explained that material distribution to NARS and private sector was done under the Material Transfer Agreement (MTA). He further added that strict plant quarantine measures are taken in the exchange of material. The value of in-country courses was emphasised, and in this context Dr. Taeb inquired about the evaluation to examine the effectiveness of in-country training courses. Dr. Vasal pointed out that the evaluation was done by participants and feedback on assessment of course provided. Dr. Paroda suggested that as the course material prepared was very useful, it would be good to publish this material for wider distribution/use, APAARI could provide needed help in this endeavour.

The members discussed the linkage between NARS, APAARI and IARCs in the implementation of CLAN. Dr. Paroda said that the new phase of CLAN was in response to the recommendations of the earlier APAARI consultation meeting to enhance the use of legumes in the cropping system, and making new legumes available to NARS for use in their farming system. He informed the members that the IFAD is likely to fund this revised project soon.

Dr. Van Bo from Vietnam suggested that food legumes should also be included in view of their importance in the sustainability of the production system. Dr. Vakabua from Fiji stressed on the relative importance of food legumes vis-à-vis animal proteins. It was felt that this will be a good topic for further discussion.

The need for increased awareness on the IPR in relation to exchange of germplasm was highlighted. The Global Forum has to address this and thus, the mechanism needs to be identified. Dr. Stein W. Bie and Dr. Derevier apprised the participants of the development occurring in this regard in the CGIAR system. Dr. Taeb emphasised that the International Undertaking on Genetic Resources being mediated by the FAO was taking much time to finalize because of the large number of member countries involved having a different stand. He felt that in view of this delay, there was a need for regional agreements relating to the free exchange of germplasm.

The members felt that the IPR related policy issues need to receive prominence as the exchange of germplasm was vital. Dr. Rosario suggested that ISNAR could organize special awareness workshop for NARS scientists on biotechnology, biosafety, bioinformation and IPR issues. Dr. Paroda pointed out that this could be taken up with involvement of all the concerned organizations such as FAO, APAARI, ISNAR, IPGRI and others in enhancing such policy issues, awareness of which in the region was rather essential. More collaboration with APAARI was stressed for these networks including the one on information networking and on Group of Fisheries and Aquatic Research (GoFAR). Among others, it was pointed out that APAARI is already associated with activities of the Underutilized Tropical Fruits Asian Network (UTFANET). Such activities could be better facilitated through MoUs.

Dr. Christian Hoste suggested that the job description for one of the APOs being provided by the Government of the Netherlands for the NARS-SC, provides for evaluation of the status regarding implementation of various global conventions and come out with relevant information to be shared with NARS.

Bringing the discussion to a close, the Chairperson thanked all the presenters for generating considerable interest. The potential of network approach to problem solving was fully appreciated.
Session IV: Group Discussion on Addressing the Challenges

This session was chaired by Mr. Ian Bevege who presented background information in brief, expressing concern on the critical issues facing NARS including financial constraints, monitoring of resources, management capacity of NARS and related issues vis-à-vis overall role of APAARI as a facilitator in regional coordination and planning. The challenges facing NARS were debated upon in four sub-groups: Sub-Group I ‘Setting Strategic Directions’ was facilitated by Mr. Ian Bevege; Sub-Group II on ‘Sharing Management Experiences’ by Dr. D. Kirtisinghe; Sub-Group III on ‘Human Resource Development’ by Dr. Nobuyoshi Maeno, and Sub-Group IV dealing with ‘Impact Assessment and Evaluation’ by Dr. Sharif Bin Ahmad.

The outcome of the deliberations of these group-discussions are summarized here.

Sub-Group I: Setting Strategic Directions

Mr. Ian Bevege initiated the topic and broadly presented an overview addressing the challenges focussing on several priority issues such as the operating environment, priority-setting and strategic planning and financing. He also dealt briefly with the organizational structure of APAARI vis-à-vis national/regional needs and its coordinating role in planning at the regional level and support to NARS. It was stressed that research should be demand/market driven, that agricultural sector is linked to other economic sectors and agricultural research is interdisciplinary to achieve desired goals ensuring effective participation of stakeholders, and the food security issues take into account the nutrition security. Overall, research needs to be managed within the national agreed framework of these issues. It was felt that for priority-setting and strategic planning, there is the need for long-term planning with short-term operational flexibility i.e. 15-20 years perspective with 5-10 years mid-term plans, annual operational plans etc. to help setting priorities in a more pragmatic manner.

To monitor research and development, and meet emerging needs, it is desirable to review priorities on a regular basis to take into account the new information/development and changes in operating environment/organizational management etc. Thus there is need to develop plans on a rolling 3-4 year basis. Preferably, NARS should set a target of 1-2% agricultural GDP for research, and work in partnership with funding agencies in priority-setting and monitoring expenditure. Private sector needs to be involved in contract research, to achieve time-framed research results. Capacity building for strategic planning and priority-setting and overall managerial leadership would need training of NARS research managers so as to increase their efficiency and effectiveness.

It was felt that APAARI can represent NARS in the deliberations of regional/global fora/other organizations and needs to mobilize support for agricultural research from high level policy makers, donors etc. by its participation in such meetings. APAARI’s perspective plan for 2020 when finalized next year, can be discussed through such linkages/consultations. Overall, in planning at regional level as a facilitator and a catalyst, APAARI’s support to national programmes to develop NARI’s/NARS capabilities and capacities, facilitate links and promote coordination/collaboration in R&D activities was highlighted.

Sub-Group II: Human Resource Development

Human Resource Development was rated as a high priority activity at national (institutes/NARIs and NARS) and regional level. It was stressed that the existing national capacities/capabilities need
to be assessed, and special training needs which may be common to the subregion/region or specific to a particular NARS, identified. Also, linkages for HRD should be worked out keeping in view the facilities and comparative advantages of NARS and mutual collaboration be strengthened; linkages could be within NARI-NARS/NARS-NARS/with CG Centres and GFAR/NARS-SC. Both long-term and short-term needs of the national programmes in capacity building are required, including major practical trainings and participatory approach inviting village level workers. Greater role of ISNAR was discussed for training on management and information technology. For organizing trainings, effective linkages of HRD were advantageous such as among NARS, CG centres and other such organizations. APAARI's role in bringing out such information on training needs/facilities available in the region for use of NARS and to plan capacity building programmes was stressed.

Also, it was felt that APAARI may facilitate exchange of expertise/scientists among NARS. Training in research management was given priority. APAARI was requested to develop a perspective plan for Human Resource Development for the region, based on NARS needs.

Sub-Group III: Sharing Management Experiences
The group discussed the organizational structures/models existing among the national programmes in the region, management issues, initiatives for reforms, resource allocation mechanisms and private sector linkages. The group realized that the existing organizational structures varied much, and recognized the heterogeneity in structure and management of small and large NARS. Among the various organizational structures/models, it was felt that a single nodal ministry handling research and education together, with a measure of autonomy could coordinate its activities with other ministries/stakeholders better and be more effective. It was felt that private sector involvement should be encouraged to make research profitable and also to identify viable investment opportunities. Modalities however need to be worked out as per NARS policies/legal support for developing/promoting links; and such research organizations need to be identified and involved at planning stage. Overall relevance of research to developmental plans was advocated, with resource allocation/competitive grants to scientists, to make research accountable and result oriented.

Sub-Group IV: Impact Assessment and Evaluation
The group laid emphasis on technology transfer among NARS, stressing more coordination in research and development. It was felt necessary to identify problems and needs. Development of technology in participatory mode i.e. Researcher-Extension Worker-Farmer, was highlighted. It was felt that the link between research and extension is very important for the transfer of desired technology. This needs to be promoted by use of several tools/measures such as demonstration plots, pilot production programmes, lab to land programmes with multimedia, audio-visual aids, farmers, NGOs meeting/field days etc. Also, priority is to be given to public awareness for all types of stakeholders, policy makers, planners etc. to keep them well-informed. Newer approaches such as of e-mail may be popularized where such facilities exist among NARS for quick dissemination of information. Also, it was felt that management-skill development was much needed by most of the research managers in NARS. APAARI's assistance was solicited in upgrading the managerial skills of NARS Senior Scientists for effective research and financial management, so that projects/activities are suitably identified and prioritized, and funding support/grant for research made available.
Further, concern was expressed on the need to evaluate on a regular basis the research progress of various activities/programmes and to monitor closely the results and achievements to justify funding and accountability. Also, it was felt that research needs to be problem-oriented with focus on sustainable agriculture as per needs of the NARS.

The group discussed the use of new options such as information technology, distance education and dissemination of published information with improved package of technology by NARS, and deliberated upon the need to identify national and international collaboration to impart training in this field with APAARI as a facilitator. The NARS felt that APAARI may facilitate access to tools for technology transfer to NARS. Also for technology transfer, it was stressed that APAARI success stories could be translated into local languages and published, and given large coverage, for their faster adoption by NARS users particularly the farming communities. The group also felt the need to undertake expert study on the impact assessment of research programmes/projects by way of social, economic and environmental benefits.

The details of specific follow-up action emerging out of the deliberations of these four subgroups are included in the recommendations.

RECOMMENDATIONS

General

1. The Expert Consultation on research management mechanisms, enabled NARS, which are at different levels of research management development, to share their strengths and varying experiences. It was felt that there is need to further strengthen NARS' capacity for R&D implementation and management. It was also recognized that the strong government support for research in establishing a stronger NARS is most crucial for the required national growth and development, and for resolving issues concerning poverty, food and nutrition security, and conservation and management of natural resources for sustainable agriculture and rural development.

2. The policy and political support for strengthening NARS in the developing countries of the Asia-Pacific region assumes great importance in the light of awareness to meet their food demands and the new developments such as globalization. In order to strengthen the NARS, it was strongly recommended that the member-countries should provide appropriate funding, at least to a minimum of 1-2% of their agricultural GDP, in order to meet the challenges of the next millennium successfully. Presently, majority of the countries provide funding support which is below 0.5% of their agricultural GDP. It was unanimously resolved that in order to sensitise the policy makers for ensuring adequate and sustained support to the NARS and also to endorse the initiatives of APAARI for regional co-operation in agricultural research, a high level meeting involving concerned Ministers be convened in the near future when APAARI Vision 2020 highlighting its perspective strategic plan could also be presented for endorsement.

3. Recognising that the agriculture and allied disciplines have individually contributed towards increased food production, it is important that relevant overall economy fully recognize the significance of the development of agricultural sector in achieving broad-based growth for the
emphasised and the need to produce training materials was stressed. APAARI can support the wider distribution of available network publications. The increased partnership/leadership taken by the NARS scientists was highly appreciated. PGR networking in the Asia-Pacific region needs to be promoted through APAARI-IPGRI partnership as it addresses conservation and use of biodiversity through increased collaboration of national PGR programmes. The proposed MoU between APAARI and IPGRI will be a visible manifestation of this closer partnership between the two organizations.

12. **Information Networking:** The role of ISNAR in developing the APAARI Web-site (homepage) was appreciated. This will facilitate access of APAARI members in receiving, providing and sharing worldwide information for their benefit. APAARI will facilitate the assessment and use of this facility among the members. ISNAR will actively pursue ADB financial support to create information technology base for APAARI that will allow research information to be interactively available to members of NARS, including the creation of E-mail discussion groups for specific topics of wider interest, involving scientists, use of diskettes and CD-Roms.

13. **Specialized Training:** The need for specialized training in several emerging issues of vital concern was recognized. It was suggested that ISNAR may organize special trainings/public awareness workshops for NARS scientists on such topics as research management, biotechnology, biosafety, bio-information and IPR issues. Trainings could also be facilitated by APAARI while other concerned organizations/fora such as FAO, APAARI, GFAR/NARS-SC could be suitably involved. Members expressed the need for increased literacy regarding the present status of issues relating to intellectual property rights, biosafety and bioethics. It was recommended that GFAR, in conjunction with CGIAR, facilitate access to relevant information and training to NARS members and assist to assess the relevance of existing guidelines for NARS' use. IPGRI was requested to provide specific information to facilitate exchange and have access and benefit sharing of plant genetic resources to members. NGO's and NARS may also have the access to these MTA formats/guidelines.

14. **Group on Fisheries and Aquatic Research:** A special meeting of 13 regional fisheries research institutions held under the aegis of APAARI recommended that APAARI formally accept and encourage the formation of the Group on Fisheries and Aquatic Research (GoFAR). The GoFAR will be a joint initiative of APAARI and ICLARM with the latter being the focal point, consisting of institutions from the Asia-Pacific region engaged in fisheries and aquatic resources research involving also the existing regional and international organizations and networks. The activities of the group will be aimed at issues concerning: commonalities between agriculture and fisheries sectors, marine capture fisheries, inland fisheries, aquaculture research, capacity building and linkages among NARS. APAARI will invite NACA, SEAFDEC, SPC (Secretariat for South Pacific Commission) and other regional organizations to associate with GoFAR.

15. **Setting Strategic Directions:** The need for improving strategic planning processes and capacity of NARS was recognized. Adequate training in strategic planning and priority-setting should be made available for national research managers, facilitated by APAARI. It was strongly
recommended that such planning should adequately combine long term perspective (15-20 years) with mid-term plans (5-10 years), while flexibility in long term implementation is needed. As effective participation by stakeholders is desirable for efficient strategic planning; it is important that stakeholders provide their inputs. This is particularly critical for end-user groups such as farmers. Their representation needs to be formalised and legitimised if their voice is to be recognized by both the NARS and the stakeholders concerned.

It was recommended that APAARI's role in planning at the national level be that of a facilitator and a catalyst. APAARI might facilitate the generation of external funds for NARI/NARS strategic planning activities including training. APAARI should also assist NARS in strengthening their planning capacities and facilitate linkages among NARS and global partners who might assist in planning such as ISNAR and ARIs.

It was also suggested that APAARI organize meetings for high level policy makers on strategic issues affecting agricultural research, and conduct policy and market studies at the regional level in the context of globalisation of agriculture and its effect on future research directions and emphasis.

At the regional level, it is recommended that APAARI conduct its own strategic planning exercise to complement national plans, developing a long term vision and strategy for regional co-operation within the framework of APAARI programmes. Such a plan should also address the issue of resourcing of APAARI both human and financial.

16. **Human Resource Development:** A broad consensus emerged from the discussions on Human Resource Development (HRD) but was very complementary. The recommendations emerged as follows:

a) **Need for further information on the Human Resource potential available in the region:** The APAARI members feel strongly the need to know better the HR potential available in the region and consider this information essential in order to develop not only national HRD Plans but also to develop sub-regional and regional HRD Plans based on gap analysis. Whilst recognising the efforts already made to prepare HR directories/inventories by the individual country members and by the APAARI Secretariat for some sub-regions, the General Assembly recommends that the APAARI take the necessary steps to develop a common data set of needed HR information acceptable by all members and that, based on the information produced and made available by each country member, the APAARI Secretariat produce a HR database for APAARI members. Members will also make available to the Secretariat to the best of their ability, updated HR information for the NARIs and, as much as possible, for the other components of the NARS.

b) **Need for further information on Training Opportunities:** The General Assembly takes note of the decreasing commitment of donors in supporting HRD, especially academic training. Consequently, they decide to make the maximum use of the opportunities offered and to develop new NARS-NARS mechanisms for training. In order to achieve these objectives, the General Assembly recommended the following:

- The IARCs inform the Secretariat of their training plans and programmes.
• The APAARI country members to provide regularly to the APAARI Secretariat information on training programmes that are planned in their territory.
• The APAARI Secretariat to collate and circulate the information on NARS training programmes to members.
• The NARS-SC Secretariat to assist APAARI in its task of identifying the common training needs in the region.

c) *Need for HRD Plans:* The General Assembly reaffirms that national HRD Plans should be based on needs and priorities identified in the national research strategic plan and recommends the APAARI Secretariat to make an attempt to develop a regional HRD Plan.

d) *Need to develop training activity in Research Management:* All participants acknowledged the fact that good scientists often may not be good research managers and hence NARS be suitably strengthened for effective management of agricultural research. The need for more training in fields related to research management as essential activities to improve the effectiveness and efficiency of the NARS was thus realized. APAARI took note of the new initiative taken by ISNAR, in collaboration with NAARM, ICAR, India to explore distance learning methods and of the recommendation made to the IARCs by the CGIAR External Review Panel to develop and make accessible the training materials through use of information technology such as Web sites. The General Assembly recommends ISNAR to further develop its training activities in research organization and management in the region.

17. *Sharing of Management Experiences:* NARS have many management structures and models and it was considered that whatever the management structure, a measure of autonomy was essential in order to maintain flexibility, objectivity and responsiveness to stakeholders needs. A single nodal ministry handling research and education in agriculture together, and able to co-ordinate effectively with other Ministries, was seen as one model worthy of consideration.

It was recognized that most NARS managers were usually senior scientists promoted late in life into management positions for which they had no previous training. Formal training in research management should be introduced into the programme of the NARS for senior scientists moving to research management. APAARI’s assistance was solicited to enhance this area of activity. The setting of internal and external reviews of NARS, at periodic intervals, was a commonly felt need to institute reforms in the NARS and to ensure that the system remains responsive to stakeholder needs and the changing research environment.

Consistency of the research agenda with the priorities established in the strategic plan of each NARS is important. Resource allocations have to be in accordance with such plans, and the principal scientists working on these projects have to be given control of budgets allocated to their projects.

There was some support for competitive grant schemes but awards should be in line with priorities established through planning processes and not distort the balance needed to achieve overall objectives. There is a continuing need to provide core budgets to cover overhead...
costs and long-term strategic programmes. These may be sourced from the public or private funds, with the former more likely.

Encouraging private sector participation to ensure that research remains a profitable investment, as well as to identify viable investment opportunities for research, was considered important. Involvement of the private sector right from the planning stage of the research programmes was considered important for effective linkage between private and public sectors. However, public sector funded research institutions need to be aware of their purpose in research for public benefit so that benefits flowing from collaboration with the private sector should not be captured entirely by the private sector.

18. Impact Assessment and Evaluation: It was recognized that transfer of available technology without dissemination loss is the most crucial issue facing developing NARS in the Asia-Pacific region. This could be achieved through effective interface/co-ordination between research and development organizations and through establishment of an effective linkage between the scientists and the farmers by forging a continuum of technology generation-assessment-refinement and transfer. New options such as using information technology, distance education and dissemination of published information describing improved package of technologies would enhance the process of technology transfer. More thrust on training of farming communities and involvement of private sector and NGOs was considered critical as public extension system alone may not be able to accomplish faster dissemination of available technologies to the farmers' fields. Effective impact assessment and evaluation mechanisms would help accelerate this process further and thus be put in place by the developing NARS in the region. It was also recommended that the publication in the local languages of the success stories, such as those published by APAARI, be further promoted and given wider publicity so that relevant technologies could be adopted by other NARS for faster agricultural growth and development.
AGENDA ITEM NO. 1: 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. Kim Kang-Kwun, Administrator, Rural Development Administration, Republic of Korea for hosting this meeting. He pointed out to the collaborative role of APAARI in promoting agricultural research and development in the NARS in this region and in this context stressed that this General Assembly meeting was not only being held in conjunction with the Expert Consultation on Research Management Mechanisms of NARS, but two more meetings have also been planned with it, namely the Fisheries Sub-Group Meeting with ICLARM (11-12 October 1998), and the CORRA group meeting (16 October 1998) with IRRI. He explained the heterogeneity among NARS in this region, the changing scenario of R&D in agriculture, and the problems faced by NARS both in the O&M system and R&D programmes. This Expert Consultation addresses these needs. Dr. Paroda appreciated the wider participation with diverse expertise, in this important meeting.

AGENDA ITEM NO. 2: ADDRESS BY THE CHAIRMAN
Dr. M. Akbar, as Chairman of APAARI, expressed his satisfaction with the activities of this relatively young regional forum and pointed to its accomplishments. These achievements were the result of interest and cooperation received from the members, associate members and other partners/support groups. He was happy with the outcome of the Expert Consultation held on Research Management Mechanisms of NARS and hoped that APAARI will be further strengthening its collaboration in view of the deliberations of this meeting, to promote R&D programmes in NARS commensurate to their needs. APAARI publications were well received and are serving a useful purpose in promoting and sharing information, and technology transfer in the region. He also welcomed the participants and expressed that the proposed agenda items be discussed.

AGENDA ITEM NO. 3: ACTION TAKEN REPORT
Dr. R.S. Paroda, Executive Secretary, provided the following details relating to action taken by APAARI Secretariat since the last meeting of the Executive Committee held at Tehran, Iran, 19-21 October, 1997.
a) **Publication of the Newsletter**

All members were appreciative of the timely publication of APAARI Newsletter. APAARI brought out two issues of its Newsletter i.e. December 1997 and June 1998. These Newsletters were widely circulated among members and other interested organizations/scientists/policy makers. The support of Mr. Peter Rosenegger, FAO Representative in India and Bhutan, in making available the services of Ms. Francesca Erdelmann, APO in the FAO office, was appreciated. Also, the December 1998 issue was being processed and would be printed in time, with efforts of Dr. R.K. Arora, APAARI Consultant. Members were requested to send their relevant inputs to the APAARI office at FAO, New Delhi.

b) **Publication of Success Stories**

Since the last meeting, three Success Stories have been published namely on:

- Agro-Tourism in Australia,
- Direct-Seeded Rice under Irrigated Conditions in Malaysia, and
- Groundnut in China.

The publication on Agro-Tourism was circulated, whereas the other two released in the meeting will be distributed soon to all the members. Also, the Success Story on Oilseeds Research and Development in India is being processed for printing.

The members discussed topics for the potential success stories to be taken up for publication including the suggestions given at the Tehran meeting and on other topics such as Management and Organization by a NARS in the region, post harvest management, IPM in Indonesia and on natural resource management. Dr. Paroda referred to the importance of dissemination of such information within NARS for technology transfer and pointed out to success achieved through publications on hybrid rice, babycorn and orchids. The Executive Secretary requested the members to help in identifying the suitable topics and authors. It was suggested that a small group may be constituted later to prioritize the topics and authors be approached for writing success stories as per guidelines on the subject.

c) **Mailing List**

While pointing to the updating of the mailing list by the APAARI Secretariat, Dr. Paroda requested the members to suggest more institutes/organizations to be kept on APAARI's mailing list. This was necessary in order to circulate our publications to a broader clientele.

d) **Proceedings of the Fourth Executive Committee Meeting and the Report on Status of Genetic Resources in the Asia-Pacific Region**

Dr. Paroda pointed out that the proceedings of the Fourth Executive Committee Meeting and the Expert Consultation on Management and Strengthening of Regional Research Networks in the Asia-Pacific Region organized by APAARI at Tehran, have been published and widely distributed.

The status report on genetic resources conservation, evaluation and utilization of crops of importance in the Asia-Pacific Region, prepared by APAARI at the request of FAO, is being edited for printing.
e) APAARI Representation in the Regional Workshop
Dr. Paroda pointed out that APAARI supported the participation of its members in important regional activities. He referred to Dr. Z. Karim, Executive Chairman, BARC, Bangladesh who participated in the workshop on Commodity Development in Asia-Pacific Region organized by the Common Fund for Commodities, 28 September to 1 October 1998 in Dhaka.

f) Circulation of NARS Publications
The Executive Secretary pointed out that the circulation of information brought out by different NARS such as Annual Reports was rather slow and stressed that concerted efforts be made by each NARS to promote this information dissemination. APAARI Secretariat will continue making similar requests once in a year.

g) Creation of a Homepage on the Internet
APAARI members in particular thanked Dr. Stein W. Bie and his staff for ISNAR's interest and collaboration in establishing a homepage for APAARI on the internet. Dr. Paroda also thanked Dr. Stein W. Bie for handing over the diskette. This will facilitate further our interinstitutional communication at a faster pace. Members were also delighted to note that this collaboration will also result in developing a regional data base.

AGENDA ITEM NO. 4: APAARI EXPERT CONSULTATION
Full support of the Rural Development Administration in organizing the current expert consultation was highly appreciated. The members placed on record the painstaking efforts of Dr. Seong-Hee Lee and his staff in organizing the meeting. The Expert Consultation on Research Management Mechanisms of NARS addressed several issues. The members expressed satisfaction on the outcome of this meeting. Dr. Paroda stressed that some of the NARS case studies presented, and all the country status reports need to be published for wider benefit of NARS and other organizations in the region. He also informed the house that the proceedings of the Expert Consultation will be published soon by APAARI. Follow-up on recommendations will be taken up on priority.

AGENDA ITEM NO. 5: ADDITIONAL APAARI ACTIVITIES
a) Fisheries Sub-Group Meeting
This meeting was jointly organized with ICLARM on 11-12 October 1998, with ACIAR, APAARI and AusAID's support, preceding the APAARI General Assembly meeting. A group of senior fisheries and aquatic resource research managers representing 13 countries (Australia, China, India, Indonesia, Korea, Malaysia, Nepal, New Zealand, Pakistan, Philippines, Sri Lanka, Thailand and Vietnam), and two international (FAO and ICLARM) and one regional organization (South East Asian Fisheries Research and Development Centre (SEAFDEC)) participated and discussed the present status of aquatic resources, sustainability, contribution to food security, research needs and priority areas for regional collaboration in the Asia-Pacific region. Recognising APAARI's interinstitutional nature and its research and development focus, the meeting agreed to request APAARI to form a group on Fisheries and Aquatic Research (GoFAR) as an integral part of it and this was endorsed by APAARI General Assembly. The GoFAR will be an integral part of APAARI, being formed of institutions from Asia-Pacific countries engaged in fisheries aquatic resources research and regional organizations...
and networks, with ICLARM as its focal point within APAARI. Modalities of operations will be framed by ICLARM. All the participants of GoFAR attended the APAARI Consultation and General Assembly meeting as observers. APAARI in particular thanked Dr. Meryl J. Williams, Director General, ICLARM, and Dr. M.V. Gupta, Coordinator of this programme, for taking this initiative and organizing the meeting so successfully. Summary proceedings of the meeting are provided in Appendix I, along with the list of participants. The integration of this group into APAARI would add value to and broaden the perspective of the membership of APAARI, and provide an established regional contact for the aquatic research sector. Further, this would also recognize the commonalities between agriculture and fisheries sectors and their R&D needs, such as on integrated farming systems, gene banking, genetic research, biotechnology and biosafety, biodiversity conservation, capacity building among NARS, food-stock production policies. Also, fisheries research in the region could be linked to the 'Global Forum on Agricultural Research through APAARI.

b) ICRISAT-ICARDA-APAARI Proposal to Support CLAN
Dr. Paroda informed the members that the revised proposal had been submitted to IFAD. He made a mention of the letter recently received from Dr. A. Slama with IFAD's favourable response to the proposal. He also thanked both ICRISAT/CLAN and ICARDA for their initiative in getting the proposal revised well in time.

c) MoU between ASPNET and APAARI
The General Assembly was informed about the efforts put in by Dr. William D. Dar and a MoU is being developed with ASPNET Secretariat.

d) APAARI's Participation in GFAR
Dr. R.S. Paroda as Chairperson of both, GF-SC and NARS-SC explained the progress in setting up of this global forum with GFAR-SC hosted by ESDAR, World Bank, Washington DC and the NARS-SC Secretariat hosted by SDRR Division, FAO, Rome, with technical support by ISNAR through secondment of Dr. Christian Hoste. He referred to the possibilities of an APO to be appointed in APAARI Secretariat at New Delhi through funding of the Netherlands Government. He also informed that an alternate representative is to be nominated from APAARI member countries on GFAR. It was decided that the new Chairman, APAARI be proposed to both GF-SC and NARS-SC as an alternate representative.

e) Supporting UTFANET
Dr. Paroda informed that APAARI extended a partial support to UTFANET in organizing its Fourth Steering Committee meeting held at Bangkok from 23-24 April 1998. He expressed concern on UTFANET's follow-up on its future activities. Dr. Ken Riley commented that Dr. Nazmul Haq was to submit a proposal for IFAD funding. Also concerns were expressed that Dr. Nazmul Haq has not yet shifted his headquarters to Malaysia.

f) INIBAP-PROMUSA Steering Committee
Dr. William D. Dar, being in the Philippines, has been requested to represent APAARI on this Steering Committee. He has very kindly agreed to do so.
g) Information Strengthening by ISNAR and CABI
Dr. Paroda emphasised the need for a regional database and informed that the Regional Technical Assistance Project (RETA) proposal on Information Network prepared jointly by ISNAR/CABI has been submitted for ADB funding. The efforts already put forth by ISNAR staff were appreciated. Dr. Stein W. Bie informed that he will be discussing the proposal with the ADB in near future.

h) MoU with IPGRI
Dr. Paroda informed the members that APAARI and IPGRI have finalized an MoU to strengthen collaborative activities on PGR Networking for the benefit of NARS in the region. Dr. Ken Riley, Regional Director, IPGRI-APO at Sendang, Malaysia is here and this MoU between APAARI and IPGRI will be signed during this meeting provided it is approved by the General Body. The members endorsed such collaborative efforts by APAARI in strengthening various research programmes in plant genetic resources of the region. Later, the General Assembly endorsed the MoU, which was then signed by Dr. R.S. Paroda on behalf of APAARI and Dr. Ken Riley on behalf of IPGRI.

AGENDA ITEM NO. 6: APAARI SECRETARIAT

Recruitment of a Technical Officer
The terms of reference of a new Technical Officer position - as a regionally recruited staff, at the FAO Bangkok were discussed. The ACIAR has agreed initially for three years to provide support for strengthening APAARI Secretariat. The ToR were approved, and it was decided to take up the matter with ADB, FAO RAP, Bangkok to provide an additional room for APAARI. The post could be advertised subsequently keeping in view the quantity of work and status of placement of an APO. He also informed that presently the services of Dr. R.K. Arora are being hired as consultant.

AGENDA ITEM NO. 7: MEMBERSHIP AND FINANCIAL STATUS

a) Membership
The Assembly was informed that 15 NARS are paid members, and efforts are being made to persuade Governments of China, Indonesia, Vietnam and Laos to become full time members. Also Bhutan and New Zealand have been approached. He also referred to the interest of Myanmar and Taiwan attending this meeting, to join APAARI. If agreed, the South Pacific Commission could also be approached. Possibilities of some countries under the recently established Group on Fisheries and Aquatic Resources (GoFAR) also exist. He pointed out the difficulties being faced by APAARI regarding frequent change of top NARS officials and also the change in Government. Further, expansion of APAARI membership to include NGOs and the private sector may be looked into. Concern was expressed to make APAARI a sustainable organization, so that it is not donor dependent. Other such possibilities could be considered and NARS and other members were requested to offer suggestions.

For expanding the membership, Mr. Ian Bevege agreed to interact with his sub-group already constituted through e-mail and offer suggestions relating to expansion of APAARI membership. After detailed discussions, it was decided to pursue China, Indonesia, Vietnam, Laos, Myanmar
and Bhutan to join APAARI. The General Assembly was also agreeable to have Taiwan as a new member of APAARI and authorized the Executive Secretary to officially approach the concerned national organization/department to join APAARI with full membership fee. It was also felt that other international organizations and institutions such as IBSRAM, APSA, ICGEB, CIP, ILRI, ICLARM, ICIMOD etc. could also be requested to become Associate Members.

b) Payment
Dr. Paroda informed that efforts are being made to remind those NARS, who have not yet paid their yearly subscription, to expedite the payment. He requested the members to take up this matter on priority. It is indeed satisfying that all members are paying regularly and in time. He appreciated and thanked the CGIAR and other international centres such as the AVRDC for their regular and timely contributions. He also informed the General Assembly that in pursuance of earlier decision a sum of US$ 300,000 has been kept in fixed deposit in the name of APAARI with Siam Commercial Bank, Banglampu Branch, Bangkok so as to get higher interest returns.

c) Financial Status
The audited accounts for the year 1997 were discussed and approved by the members. The statement of funds as received upto 15 September 1998 was also reviewed by the members. Dr. Paroda informed that the funds allocated for 1998 were available and many of the activities are in operation and will be completed during this year. There may be minor adjustments among the various Heads of Budget but it will be within the overall allocation already approved by the General Assembly.

AGENDA ITEM NO. 8: ACTION PLAN for 1999-2000
The activities to be taken up during 1999-2000 were reviewed and approved such as publication of Newsletter, Success Stories, Technical Reports, Support to Regional Networks, Information Management, funding-support to the members of APAARI to participate in meetings, such as next General Assembly meeting and the Expert Consultation. The members were in agreement with the activities to be carried out, and agreed to contribute the required information for the newsletter in particular. Also members agreed to send suggestions regarding Success Stories to be published in future.

AGENDA ITEM NO. 9: BUDGET FOR BIENNium 1999-2000
The proposed budget for 1999-2000 was discussed and approved in principle by the General Assembly. It was suggested that in future more details on activity items vis-à-vis funds allocated could be given. It was pointed out that the major increase in budget proposed was for the establishment of the Secretariat, especially for the appointment of a Technical Officer, and for publications as printing cost has risen. Suggestions of Mr. Ian Bevege were appreciated and it was agreed that he may provide his guidance in budget framing to the APAARI Secretariat. The General Assembly appreciated the support of ACIAR in particular for funding the position of a technical officer to begin with for the first three years.
AGENDA ITEM NO. 10: SIXTH GENERAL ASSEMBLY AND FIFTH EXECUTIVE COMMITTEE MEETING

a) Sixth General Assembly
The suggestions from NARS to host this meeting were invited. Thailand was kind enough to offer to host the next General Assembly in Bangkok, to be held during second half of 2000. APAARI Perspective Plan 2020 would be discussed during this meeting, for which the Secretariat is to begin an exercise in advance.

b) Fifth Executive Committee Meeting
The suggestions from NARS were considered. The offer of Dr. M. Akbar for Pakistan Agricultural Research Council to host the Fifth Executive Committee meeting during 1999 in Islamabad, Pakistan, was accepted. Referring to the topics for the Expert Consultation, Dr. Paroda informed about IIMI's interest in a meeting on Water Management related issues of regional concern. Also ICIMOD (International Centre for Integrated Mountain Development) has expressed interest to hold a joint meeting with APAARI on problems/issues in mountain agriculture. Other topics included natural resource management and participatory on-farm approach. Also more weightage needs be given to non CG mandate crops of regional importance and networking through NARS-SC under GFAR. Further, the progress of various networks could be reviewed at this meeting. Also the GFAR 2000 Agenda related issues could be discussed in detail. It was agreed to have this meeting hosted in Islamabad during August/September 1999.


The elections were unanimously held and the following were elected to the Executive Committee for 1999-2000.

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

Winding up the deliberations of the General Assembly, both Dr. M. Akbar and Dr. R.S. Paroda expressed on behalf of APAARI, their gratitude to the Rural Development Administration, Republic of Korea. They also thanked the member participants for lively discussions and suggestions relating to future APAARI activities. Due appreciation was also accorded for the assistance provided by the Secretariat staff of APAARI at FAO RAP, Bangkok and at FAO, New Delhi.

At the end, all members appreciated the efforts of APAARI Secretariat, especially those of Dr. R.S. Paroda, Executive Secretary in providing all the guidance and support despite his multifarious activities.

The meeting ended with a vote of thanks to the Chair.
THE FIFTH GENERAL ASSEMBLY OF APAARI AND
EXPERT CONSULTATION ON RESEARCH MANAGEMENT MECHANISMS OF
NATIONAL AGRICULTURAL RESEARCH SYSTEMS (NARS)

13-15 October 1998

Hosted by

Rural Development Administration (RDA)
Suwon, Republic of Korea

PROGRAMME

OCTOBER 13, 1998 (TUESDAY)

0800-0900 Registration

INAUGURAL SESSION

Chairman : Dr. M. Akbar

0900-0910 Welcome and Objectives of the Expert Consultation
Dr. R.S. Paroda

0910-0915 Introduction of Participants

0915-0930 Brief comments by Co-sponsors
Dr. Stein W. Bie (ISNAR)
Mr. I. Bevege (ACIAR)

0930-0940 Chairman's Address
Dr. M. Akbar

0940-0955 Release of Publications and Inaugural Address by the Chief Guest
Mr. Kang-Kwun Kim
Administrator
Rural Development Administration (RDA)

0955-1000 Vote of Thanks
Dr. Nobuyoshi Maeno

1000-1010 Group Photograph

1000-1030 Tea Break
EXPERT CONSULTATION ON RESEARCH MANAGEMENT MECHANISMS OF NARS

Session-I  MANAGING NARS—INTERNATIONAL INITIATIVES

Chairman : Dr. Ronald P. Cantrell
Facilitator : Dr. R.D. Ghodake

1030-1100 Helping NARS Retool – an ISNAR Approach  Dr. Stein W. Bie
1100-1130 Presentation on Global Forum on Agricultural Research (GFAR)  Dr. Alain Derevier
1130-1200 Presentation on Role of NARS-SC for Strengthening Regional Fora Activities  Dr. Christian Hoste
1200-1230 Developing Information Networking – Present Status  Dr. Stein W. Bie
1230-1300 Report on Fisheries Sub-Group Meeting  Dr. Meryl J. Williams
1300-1400 Lunch

Session-II  MANAGING NARS—NATIONAL INITIATIVES

Chairman : Dr. Stein W. Bie
Facilitator : Dr. S. Charnnarongkul

1400-1445 Presentation on Secretariat Paper—Major Management Issues Facing NARS – A Case Study of ICAR  Dr. R.S. Paroda
1445-1515 NARS Presentation on a Case Study – Philippines  Dr. B.P. del Rosario
1515-1600 Brief discussion following above presentations
1600-1630 Tea Break

Session-III  NETWORK INITIATIVES

Chairman : Dr. Meryl J. Williams
Facilitator : Dr. M.C. Saxena

1630-1800 Short Presentations on Network Activities
TAMNET
CLAN
PGR

1800-1830 Discussion

2000 Dinner Hosted by Rural Development Administration
OCTOBER 14, 1998 (WEDNESDAY)

Session IV

GROUP DISCUSSION ON ADDRESSING THE CHALLENGES

Facilitator: Mr. Ian Bevege

0900-1030 Setting Strategic Directions
- Strategic Planning - long term
- Priority-setting mechanisms
- The policy/funding support
- National/International collaborations

1030-1100 Tea Break

Facilitator: Dr. D. Kirtisinghe

1100-1300 Sharing Management Experiences
- Organizational structures/models
- Management issues
- Initiatives for reforms
- Resource allocation mechanisms
- Private sector linkages

1300-1400 Lunch

Facilitator: Dr. Nobuyoshi Maeno

1400-1600 Human Resource Development
- Developing capacity building - Special training needs
- Developing linkages

1600-1630 Tea Break

Facilitator: Dr. Md. Sharif Bin Ahmad

1630-1800 Impact Assessment and Evaluation
- Technology transfer - R&D co-ordination
- Information dissemination and public awareness
- Evaluation and monitoring mechanisms
- Impact assessment towards sustainable agriculture
- Some Success Stories

2000 Dinner Hosted by APAARI
OCTOBER 15, 1998 (THURSDAY)

0840-0900 Leave for the Rural Development Administration (RDA)
0900-0920 Slide presentation of rural development programme in Korea
0920-1000 Visit to the Agricultural Sciences Exhibition Hall, RDA
1000-1030 Leave for Hotel
1030-1100 Tea Break

PLENARY SESSION

Chairman : Dr. R.S. Paroda
Facilitator : Dr. B.P. del Rosario

1100-1200 Recommendations
1200-1300 Lunch

FIFTH GENERAL ASSEMBLY OF APAARI

Chairman : Dr. M. Akbar
Vice-Chairman : Dr. Nobuyoshi Maeno
Executive Secretary : Dr. R.S. Paroda

1300-1630 General Assembly Meeting
1630-1700 Tea Break
1700-1800 General Assembly Meeting

[Evening Free]
THE FIFTH GENERAL ASSEMBLY OF APAARI AND EXPERT CONSULTATION ON RESEARCH MANAGEMENT MECHANISMS OF NATIONAL AGRICULTURAL RESEARCH SYSTEMS (NARS)

13-15 October 1998, Suwon, Republic of Korea

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THE FIFTH GENERAL ASSEMBLY OF
ASIA-PACIFIC ASSOCIATION OF AGRICULTURAL RESEARCH INSTITUTIONS (APAARI)
13-15 October 1998, Suwon, Republic of Korea

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 Consultations on:
   a) Management and Strengthening of Regional Research Networks in the Asia-Pacific Region
   b) Expert Consultation on Research Management Mechanisms
5. Additional APAARI Activities
6. APAARI Secretariat—Recruitment of Technical Officer
7. Membership and Financial Status
10. Sixth General Assembly and Fifth Executive Committee Meeting
11. Election of Executive Committee 1999-2000
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 action of the Fourth General Assembly of APAARI held at New Delhi on November 26, 1996 and the Fourth Executive Committee meeting held at Tehran, Iran from 19-21 October 1997 are as under:

a) Publication of the Newsletter

APAARI brought out two issues of its Newsletter, i.e. December 1997 and June 1998. The issues were well received. It was also affirmed that for the free flow of information, this initiative of APAARI should continue.

For bridging the information gap, the APAARI has called for the active participation of the Members/Associate Members/other readers by requesting them to share the information on latest breakthroughs in Agriculture and provide useful inputs/news for the Newsletter.

Co-operation of the Members/Associate Members in this effort would further enhance the usefulness of the Newsletter.

b) Publication of Success Stories

The Success Stories on "Agro-Tourism in Australia" and "Wheat Production in Iran" were published and circulated to all the Members/Associate Members.

Also, the Success Story on "Direct Seeded Rice under Irrigated Conditions in Malaysia" and "Groundnut in China" are under print and will be released at the meeting.

New Success Story in the pipeline:-

- Success of Oilseeds Research and Development in India

Success Stories are an effective link among the member countries for sharing the experiences based on the successful implementation of the research results. In order to further strengthen this initiative, APAARI has requested its members to indicate topics worth covering in future, which will be discussed
at the Fifth General Assembly in the Sub-Committee to be formed to review and prioritise the suggestions received from various members.

c) Mailing List
More Institutions/Contacts were added to the mailing list by the APAARI Secretariat in FAO, New Delhi and publications and other information mailed to them. Members are requested to suggest the names of institutes and organizations which they would like to be on APAARI's mailing list.

The proceedings of the Fourth Executive Committee meeting and Expert Consultation on Management and Strengthening of Regional Research Networks in the Asia-Pacific Region organized by APAARI at Tehran, Iran in October 19-21, 1997 have been published. The report on the present status of genetic resources conservation, evaluation and utilization of crops of importance in the Asia-Pacific Region, prepared by APAARI at the request of FAO, is being edited for printing.

e) Effective Representation of APAARI at the Workshop on Commodity Development in Asia-Pacific Region:
Dr. Z. Karim, Executive Chairman, Bangladesh Agricultural Research Council was nominated to participate in the Workshop on Commodity Development in Asia-Pacific Region organized by Common Fund for Commodities from 28 September to 1 October 1998 in Dhaka, Bangladesh.

f) Circulation of Annual Reports and other important publications among the Member Countries:
As a follow up on a suggestion made at the Fourth General Assembly and reiterated at the Fourth Executive Committee meeting to strengthen the information management capacity of APAARI, the Members/Associate Members were requested to circulate their Annual Reports and other relevant publications to all the members of APAARI. Substantial circulation of reports has already taken place.

g) Creation of a “Homepage” on the Internet:
The ISNAR was approached for creating a Web Page on the Internet for APAARI, so that NARS research highlights could be put on the information highway. ISNAR has agreed to assist APAARI in this regard. Accordingly, ISNAR will work with the agricultural research institutions of developing countries to develop the homepage and link them with ISNAR's own web page. This service with greater accessibility via e-mail will facilitate/promote inter-institutional communication. Necessary information to ISNAR has already been provided by APAARI.

AGENDA ITEM NO. 4: APAARI EXPERT CONSULTATIONS

a) Management and Strengthening of Regional Research Networks in the Asia-Pacific Region
The Research Networks play an important role in agricultural research as a means of effective and efficient use of limited human resource for achieving desired research goals. The Expert Consultation
on “NARS-CGIAR Partnership” held at New Delhi during February, 1996 also emphasised the sustainability of the regional network involving NARS and CG Centres with the active involvement of APAARI. The Rice-Wheat Consortium, CLAN and TAMNET have emerged as useful models of the current NARS-NARS and NARS-CGIAR collaboration.

APAARI, in its endeavour to provide strong support to the Research Networks, organized an Expert Consultation on “Management and Strengthening of Regional Research Networks in the Asia-Pacific Region” at Tehran, Iran during October 19-21, 1997.

b) Expert Consultation on Research Management Mechanisms of NARS

It was proposed to hold a Fifth General Assembly of APAARI and the Expert Consultation on Research Management Mechanisms of National Agricultural Research Systems (NARS) at Suwon, Republic of Korea, 13-15 October 1998. Accordingly the same has been organized currently with the full support of Dr. Seong-Hee Lee.

AGENDA ITEM NO. 5: ADDITIONAL APAARI ACTIVITIES

a) Formation of a Fisheries Sub-Group under APAARI: ICLARM-APAARI proposal for AusAID support

A copy of the letter written by DG, ICLARM as well as by the Executive Secretary, APAARI to the NARS leaders seeking their suggestions and support for this important initiative was circulated at the Fourth Executive Committee meeting.

A request application has been submitted by ICLARM and APAARI for AusAID’s support to hold a Planning Meeting for the Fisheries Sub-Group of APAARI. Fisheries and Aquaculture play an important role in nutrition, employment and foreign exchange earnings in this region. The Fisheries Sub-Group will identify regional constraints in this field and promote suitable programmes for management of natural aquatic resources. APAARI-ICLARM propose to hold the Planning Meeting from 11-12 October 1998, prior to the APAARI Expert Consultation in Korea.

b) ICRISAT-ICARDA-APAARI Joint Proposal for Funding Support to Network (CLAN) Activities

The Concept Note seeking Funds for Coordination of Cereals and Legume Asia Network (CLAN) has been submitted to the International Fund for Agricultural Development (IFAD) by APAARI and was also circulated at the Fourth Executive Committee meeting. As a follow-up a proposal was prepared in December 1997 and subsequently revised in July 1998. This has been submitted to IFAD. With IFAD support, if required, a meeting of national coordinators/participants involved in CLAN network activities may be organized later at New Delhi to finalize the Network Joint proposal (ICRISAT/ICARDA/APAARI).

c) MoU between ASPNET and APAARI

A copy of the letter from Dr. William D. Dar suggesting a formal link between APAARI and ASPNET, in the form of a MoU, was put up for consideration of the Fourth Executive Committee. This matter is being pursued further with ASPNET Secretariat.
d) APAARI’s participation in Global Forum on Agricultural Research (GFAR)

The GFAR Committee (Global Forum Steering Committee [GF-SC], NARS Steering Committee [NARS-SC]) met at Brasilia in June 1998 and took several decisions. Dr. R.S. Paroda, Executive Secretary, APAARI was elected as chairperson of both the GF-SC and the NARS-SC. Dr. Paroda’s role in this Forum will promote APAARI activities in GFAR consultations on regional and sub-regional fora, through APAARI’s participation in GFAR deliberations, and the forthcoming 2nd Global Forum meeting proposed to be held in Germany in 2000.

APAARI will be represented in NARS-SC and GFAR, both representative and alternate representative have to be chosen from APAARI member countries.

e) Supporting UTFANET Activities

The Fourth General Assembly of APAARI in its meeting at New Delhi on November 26, 1996 had endorsed UTFANET activities. The IFAD Project Proposal has subsequently been developed by UTFANET and national coordinators involved in this programme, in consultation with ICUC and APAARI. This was further discussed at the Fourth Steering Committee Meeting of UTFANET from 23-24 April 1998 held at Horticultural Research Institute, DOA, Bangkok, Thailand. APAARI extended a partial support of US$ 3000. The proposal was further refined for consideration by IFAD and necessary follow-up is being taken by Dr. Nazmul Haq, Coordinator, UTFANET.

f) INIBAP-PROMUSA Steering Committee

APAARI has nominated Dr. William D. Dar as the representative of the Asia and Pacific NARS to serve on the INIBAP-PROMUSA Steering Committee. This will provide opportunity for more interactions with Dr. A. Molina, INIBAP Regional Coordinator for Asia and the Pacific based in the Philippines, to the overall benefit of NARS for the region.

g) Information Strengthening by ISNAR and CABI

ISNAR and CABI will support strengthening the information management capacity of APAARI. Follow up action has already been initiated by ISNAR (as given under item 3 g). It is intended to disseminate agricultural information in the Asia-Pacific by establishing an Electronic Information Network Mechanism. A draft proposal for a Regional Technical Assistance Project (RETA), on - An APAARI Information Network has been prepared by ISNAR and CABI for consideration of Asian Development Bank.

h) MoU with IPGRI

As per recommendations of the Fourth Executive Meeting, follow-up action has been taken and IPGRI has been requested to develop a draft MoU between APAARI and IPGRI to strengthen collaborative activities on networking, priority-setting, information exchange and sourcing funds.

AGENDA NO. 6: APAARI SECRETARIAT: RECRUITMENT OF TECHNICAL OFFICER

With ACIAR support, APAARI Secretariat at FAO Bangkok is to be strengthened with the recruitment of a Technical Staff. The ACIAR has agreed in principle to provide partial funding support for the
next three years. The appointee will facilitate the Executive Secretary in performing all technical activities. The position is proposed for a national staff and the Terms of Reference (ToR) are appended for information and approval (Annex IV-a).

The SDRR Division of FAO has also approached the Dutch Government to provide an APO for APAARI. This matter is further being pursued.

AGENDA ITEM NO. 7: MEMBERSHIP AND FINANCIAL STATUS

a) Membership
The existing national membership of APAARI is 15. The Executive Secretary, has approached Mr. M.W. Dunbier, Chief Executive (Crop and Food Research), New Zealand to consider joining the APAARI, but the Government has refused to join presently. Efforts have also been made to persuade China, Indonesia, Vietnam and Laos to become full time members of APAARI to boost research initiatives in the region. Despite two reminders, their response is still awaited. Secretariat would continue pursuing further. Bhutan has also been approached again.

b) Payment
A Statement showing the current status of payment of membership fee as on 15 September 1998 is placed at Annex IV-b to the Agenda. All the other member countries have been reminded to clear their dues.

All members are being requested to ensure that dues are paid promptly and at the earliest convenient.

It was noted that a membership fee of US$ 6,000 only had been received from Pakistan even though a commitment for the revised fee of US$ 10,000 had been made at the last General Assembly. Dr. Akbar has already been requested to look into the matter and process the remaining payment.

The Executive Secretary sought proposals for bringing in additional funding for APAARI and felt that a Corpus Fund should be established with donor support (IFAD, ADB and Private Sector) in order to ensure long term sustainability.

Based on the recommendations of the Fourth General Assembly suggesting the CG Centres/IARCs to make a token contribution of US$ 3,000, for the activities of APAARI in the region, the contribution was received from the CG and other centres. The Asian Vegetable Research and Development Centre (AVRDC), International Maize and Wheat Improvement Centre (CIMMYT), International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), International Irrigation Management Institute (IIMI), International Rice Research Institute (IRRI), International Plant Genetic Resources Institute (IPGRI), International Service for National Agricultural Research (ISNAR) and the International Centre for Agricultural Research in the Dry Areas (ICARDA), for the year 1998.

For higher interest, an amount of US$ 300,000 has been kept in the fixed deposit in APAARI account with the Siam Commercial Bank, Bangkok.

c) Financial Status
The summary statement of accounts for the period ending 31 October 1997 along with a comparative statement between the budget and actuals used during the period 1st January to 31st October 1997 were circulated during the Fourth Executive Committee meeting.
The audited accounts for the year 1997 are placed at Annex IV-c for kind perusal/approval of the members. The statement of contribution/funds received as on 15 September 1998 is given at Annex IV-d.

AGENDA ITEM NO. 8: ACTION PLAN FOR 1999-2000
The various activities taken up/initiated during 1999-2000 are to be discussed and approved. These relate to:
- Publication of Newsletter
- Success Stories
- Other Technical Reports
- Support to important Regional Networks
- Strengthening the information management capacity of APAARI-ISNAR/CABI collaboration
- Planning for the next General Assembly/Executive Committee Meeting/Expert Consultation

Suggestions of the Members are invited on the above.

The Statement of budget approved by the Fourth Executive Committee meeting in October, 1997 at Iran for the year 1998 and that proposed for 1999 and 2000 now for consideration are given in Annex IV-e.

AGENDA ITEM NO. 10: SIXTH GENERAL ASSEMBLY AND FIFTH EXECUTIVE COMMITTEE MEETING
a) Sixth General Assembly
Suggestions from NARS to host the Sixth General Assembly will be discussed in the meeting. It is proposed to hold this in 2000.

b) Fifth Executive Committee Meeting
Suggestions from NARS to host the next Executive Committee meeting will be invited for having it organized in 1999.

The election of new Executive Committee is proposed. The list of past elected executives is attached. (Annex IV-f)

AGENDA ITEM NO. 12: ANY OTHER ITEM
ASIA-PACIFIC ASSOCIATION OF AGRICULTURAL RESEARCH INSTITUTIONS (APAARI)

Terms of Reference of the Technical Officer
APAARI Secretariat, FAO RAP, Bangkok

The Technical Officer will work under the overall supervision of the Executive Secretary, APAARI. The job profile is as under.

Duties and Responsibilities
1. Providing technical assistance to the Executive Secretary for conduct of APAARI activities.
2. Attending to official correspondence and day-to-day scientific/technical matters.
3. Attending to Technical/Editorial matters relating to reports, special publications, newsletters, proceedings and their printing.
4. Keeping data-files for diverse APAARI activities in a systematic order.
5. Distribution/dissemination of published APAARI literature and other information to different countries/APAARI members and updating of mailing list.

Qualifications
1. Good Masters Degree in Science (Agriculture, Biological Sciences) with at least 3 years experience of handling technical work in an agricultural organization/research institute/international, regional or national centre of repute.
2. Good knowledge of handling Computers and its various applications (MS Word, Excel, Power Point, Page Maker and Microsoft E-mail, Internet etc.) Data Management, Electronic copy conversion for placing data on Internet.
3. Experience of Technical Report preparation/tabulation of data/editing of reports, etc.

Salary
A good salary package commensurate to qualifications and experience will be offered. The initial appointment will be for three years.
## ASIA-PACIFIC ASSOCIATION OF AGRICULTURAL RESEARCH INSTITUTIONS (APAARI)

### Membership Fee

**Status as on 15 September 1998**

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<thead>
<tr>
<th>S.No.</th>
<th>Country</th>
<th>Year</th>
</tr>
</thead>
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<tr>
<td>1.</td>
<td>Australia</td>
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<tr>
<td>2.</td>
<td>Bangladesh</td>
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</tr>
<tr>
<td>3.</td>
<td>Fiji</td>
<td>X</td>
</tr>
<tr>
<td>4.</td>
<td>India</td>
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</tr>
<tr>
<td>5.</td>
<td>Iran</td>
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</tr>
<tr>
<td>6.</td>
<td>Japan</td>
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</tr>
<tr>
<td>7.</td>
<td>Malaysia</td>
<td>X</td>
</tr>
<tr>
<td>8.</td>
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<td>9.</td>
<td>Pakistan</td>
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</tr>
<tr>
<td>10.</td>
<td>Papua New Guinea</td>
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<tr>
<td>11.</td>
<td>Philippines (PCARRD)</td>
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<td>12.</td>
<td>Republic of Korea</td>
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<tr>
<td>13.</td>
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<tr>
<td>14.</td>
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<tr>
<td>15.</td>
<td>Western Samoa</td>
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</table>
# ASIA-PACIFIC ASSOCIATION OF AGRICULTURAL RESEARCH INSTITUTIONS (APAARI)

**Summary Statement of Accounts**

01 January – 31 December 1997  
(US Dollars)

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<thead>
<tr>
<th>Items</th>
<th>Received</th>
<th>Disbursements</th>
<th>Balance</th>
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<td></td>
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<td>6. APAARI Secretariat Support:</td>
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<td>6.3 Miscellaneous, Communications, Hospitality</td>
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Total US$: 330,061.05

Exchange Rate: 1 US$ = 25 Baht

Amount in Saving Account (Baht: 30,907.25) | US$ 1,236.29 |
Amount in Saving Account (US Dollars): 328,576.77 |
Amount in Current Account (Baht: 4,138.74) | US$ 165.55 |
Cash in hand (Baht: 2,061.00) | US$ 82.44 |

Total US$: 330,061.05

Dr. R.S. Paroda  
Executive Secretary

Ms. Urairat Rujirek  
Secretary & Accounts APAARI

Ms. Chavalit Sasananan  
External Auditor
# ANNEX IV-d

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

**Status of Contribution Received as on 15 September 1998**

(US Dollars)

<table>
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<tr>
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<td><strong>59,950.36</strong></td>
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<td><strong>90,949.08</strong></td>
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<td><strong>58,916.69</strong></td>
<td><strong>4,300.31</strong></td>
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| Total Received               | 417,616.38           | As at 15/9/1998      |
| Total Received in 1998       | 101,865.77           |
# Proposed Budget for 1999-2000

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

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Publications (Newsletter, Directory, Technical Reports, etc.)</td>
<td>15,000</td>
<td>25,000</td>
<td>30,000</td>
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<td>2.</td>
<td>APAARI Secretariat Support</td>
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</tr>
<tr>
<td></td>
<td>i) Secretary/Technical Officer</td>
<td>30,000</td>
<td>50,000</td>
<td>60,000</td>
</tr>
<tr>
<td></td>
<td>ii) Office Stationary &amp; Postage</td>
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<td>iii) Miscellaneous Items</td>
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<td>3.</td>
<td>Consultancy/Travel</td>
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<td>4.</td>
<td>Training/Selected Research Projects/Network Support</td>
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<td>40,000</td>
<td>45,000</td>
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<td>5.</td>
<td>Expert Consultation/General Assembly, Executive Committee Meeting of APAARI (Partial support)</td>
<td>20,000</td>
<td>25,000</td>
<td>35,000</td>
</tr>
</tbody>
</table>

**Total** | **1,50,000** | **2,05,000** | **2,50,000** |

### Note:
1. The above Budget for the years 1999 and 2000 is in line with 1998 Budget approved by the last Executive Committee meeting of APAARI in 1997.

2. In the context of the current situation of FAO, Regional Office for Asia and the Pacific, Bangkok, all autonomous technical bodies under the aegis of FAO would be required to bear the cost of utility/service facilities in the new building where all the autonomous bodies secretariat have been accommodated.

3. For the Secretariat support, ACIAR has agreed to provide partial support of 30,000 Australian dollars per year for the next three years.
ASIA-PACIFIC ASSOCIATION OF AGRICULTURAL RESEARCH INSTITUTIONS (APAARI)


Executive Committee for 1991-1992
Chairman : Dr. Md. Yusof Bin Hashim
Vice-Chairman : Dr. Keith W. Steele
Members : Prof. W. Lianzheng
           Mr. C.R. Mahapatra
           Dr. Maripaz I. Perez
           Mr. Tubuola Tavita
Executive Secretary : Dr. R.B. Singh

Executive Committee for 1993-1994
Chairman : Dr. Young Sang Kim
Vice-Chairman : Mr. Balthasar M. Wayi
Members : Prof. Wang Lianzheng
           Dr. Zafar Altaf
           Dr. William D. Dar
           Mr. Montri Rumakom
Executive Secretary : Dr. R.S. Paroda

Executive Committee for 1995-1996
Chairman : Dr. William D. Dar
Vice-Chairman : Mr. Abbas Keshavarz
Members : Dr. Md. Sharif Bin Ahmad
           Dr. Shiva Bahadur Nepali
           Dr. Young Sang Kim
           Dr. S.T. Semisi
Executive Secretary : Dr. R.S. Paroda

Executive Committee for 1997-1998
Chairman : Dr. M. Akbar
Vice-Chairman : Dr. Nobuyoshi Maeno
Members : Dr. Z. Karim
           Dr. Ananta Dalodom
           Mr. M. J. Kumar
           Dr. William D. Dar
Executive Secretary : Dr. R.S. Paroda
On 11-12 October 1998, a group of senior fisheries and aquatic resource research managers representing 13 countries (Australia, China, India, Indonesia, Korea, Malaysia, Nepal, New Zealand, Pakistan, Philippines, Sri Lanka, Thailand and Vietnam) met in Suwon, Republic of Korea, to discuss the present status of aquatic resources, sustainability, contribution to food security, research needs and priority areas for regional collaboration in the Asia-Pacific Region. Four other countries (Bangladesh, Fiji, Papua New Guinea and Western Samoa) who expressed interest in attending the Meeting could not make it at the last moment due to other engagements. In addition, two international (FAO and ICLARM) and one regional organization (South East Asian Fisheries Research and Development Centre, SEAFDEC) attended and a second regional organization (Network of Aquaculture Centres in Asia-Pacific, NACA) was unable to attend, but sent statements of strong interest in the fisheries and aquatic resources group of APAARI. The list of participants is given in Annexure-2.

Recognizing APAARI’s interinstitutional nature and its research focus, the Meeting agreed to request APAARI to form a Group of Fisheries and Aquatic Research (GoFAR) as an integral part of it.

The integration of this group into APAARI would add value to and broaden the perspective of APAARI and provide an established regional contact point for the aquatic research sector. The explicit inclusion of aquatic resources research into APAARI would also recognize the commonalities between agriculture and fisheries’ sectors and their research needs and interactions. The Meeting recognizes the urgent regional needs to have the sectors working more closely together.

The main common areas for closer linkages and research are:
- Integrated farming systems
- Watershed management
- Efficient water and land use
- Gene banking
- Genetic research/biotechnology
- Biodiversity conservation
- Feedstock production and management
- Health management
- Rural development and resource management policies
The meeting concluded that aquatic resources, especially fisheries and aquaculture resources:

- Play an important role in the economies of the Asia-Pacific region which produces about 60% of global aquatic resources production, including 91% of world aquaculture production and 56% of capture fisheries production;
- Contribute 30-70% of animal protein intake for people in the region;
- Rank between first to fourth in total national export earnings in most countries;
- Employ 1 to 8% of the populations directly and many more in ancillary industries including large numbers of women in the post-harvest sector;
- Contribute high quality protein to the diet of rural families; and
- Provide the fastest growing food production sector in the world, due mainly to rapid developments in aquaculture in the Asia-Pacific region.

The meeting welcomed the news that the Food and Agriculture Organization (FAO) and the International Food Policy Research Institute (IFPRI) had recently decided to put aquatic resources into their global models of world food production.

FAO projections for food fish demand based on population growth and other factors which drive demand, saw the need for an additional 40-50 million tonnes of fish production by the year 2010, worldwide, as against the present production of some 80 million tonnes of food fish. Despite the importance of the aquatic resources sector and the recent fast development of aquaculture production, the world demand for fish by the year 2010 may not be met because of the following constraints and issues, as identified by the Meeting:

**Stock management**
- Sixty percent of major world fish stocks are overexploited or fully exploited and their catches will decline if they are not better managed immediately;
- In addition to over-exploitation, capture fishery resources are also threatened by land-based activities which degrade aquatic habitats (agriculture, forestry, irrigation, power generation, industrial and urban development).

**Aquaculture**
- Uncertain sustainability of aquaculture production due to continuous environmental degradation, disease outbreak, competition for dwindling water resources and feeds with other sectors;
- Inequity of distribution of benefits from aquaculture leading to conflicts and displacement of poorer producers;
- The activities of the small scale rural sector, the main fish producers, are not fully integrated in rural development policies for agriculture, livestock and water.

**Biodiversity**
- Declining aquatic biodiversity, especially in fresh waters, which limits options for new species and strains for aquaculture and diminishes the natural productivity and resilience of aquatic ecosystems;
Technical Support Services

- Poor or nonexistent aquaculture and fisheries extension services and weak linkages between research and extension in many countries;
- Lack of data for planning purposes;
- Increasing but still inadequate research and development capacity at the national, regional and international levels.

Profile of the Sector

- Decreasing attention to the aquatic resources sector by many bilateral and multilateral development assistance agencies;
- Lack of fisheries and aquatic resources voice in the Global Forum on Agricultural Research;
- Lack of priority to the aquatic resources sector in many countries, thus endangering the food security of the many millions of poor families which depend on the resources.

The Meeting recognized that regional research collaboration would benefit all countries, organizations and networks in the region by:

- Speeding the exchange of knowledge, research methods and sectoral development options among researchers working on similar problems;
- Avoiding unnecessary duplication of research;
- Allowing spill-over of research results outside national boundaries;
- Sharing specialized research facilities and expertise (example: disease diagnosis);
- Facilitating linkages among researchers;
- Providing a mechanism whereby fisheries and aquatic resources research issues could be coordinated regionally and then raised in the Global Forum on Agricultural Research;
- Developing a mechanism for intersectoral activities with forestry and agricultural research.

The Meeting identified research and research management areas common to the Asia-Pacific region which could be addressed through regional collaboration. Of greatest interest to APAARI are:

- Fisheries being an important food producing sector, could strengthen APAARI's goal of achieving food security in the region;
- Existing regional fisheries networks and organizations could be linked through the proposed APAARI Fisheries Sub-Group;
- The experience of crops and livestock sectors could be drawn upon and strengthened in establishing aquatic resources gene banking and studying biodiversity regional needs;
- Knowledge of matters for genetic enhancement of aquatic species and exchanging germplasm for breeding under appropriate bio-safety and quarantine protocols could be shared;
The systems approach to natural resources could be developed and the integration of aquatic resource systems with management of other rural sectors could be ensured;

Interdependencies among aquatic resources, crops and livestock sectors with respect to water use and feeds could be studied;

Fisheries research in the region could be linked to the Global Forum on Agricultural Research through APAARI.

The group discussed and highlighted the regional priorities in research, capacity building, linkages among NARS and linkages between aquatic resources research and agricultural research.

RECOMMENDATIONS AND SUGGESTIONS TO APAARI

The Meeting recommends that:

• APAARI formally accepts and incorporates the Group on Fisheries and Aquatic Research (GoFAR);

• The GoFAR will be an integral part of APAARI, being formed of institutions from Asia-Pacific countries which are engaged in fisheries and aquatic resources research and regional and international organizations and networks;

• ICLARM will be the focal point for GoFAR within APAARI;

• The activities of the group will be aimed at issues concerning:
  Commonalities between agriculture and fisheries sectors;
  Marine capture fisheries;
  Inland fisheries;
  Aquaculture;
  Research capacity building and linkages among NARS.

• APAARI invite NACA, SEAFDEC and SPC (Secretariat for Pacific Community) and other regional organizations to join GoFAR.

• The Meeting identified regional priorities in research, capacity building, linkages among NARS, the details of which are in the Annexure-1.

• The modus operandi of GoFAR will be developed in consultation with the APAARI Secretariat. The operations of the group will include:
  * An annual meeting which would be usually held in conjunction with the APAARI annual meeting;
  * Establishment of national focal points in each country and appointment of a GoFAR National Coordinator;
  * The National Coordinators will form the central body of GoFAR;
  * GoFAR will organize and conduct workshops, conferences and projects related to its activities and priorities in the regional context.
The members at the Meeting suggested that activities in the following areas could be initiated in the region:

1. Production of a comprehensive manual on integrated rice-fish farming (FAO/ICLARM indicated implementing this activity);
2. Gender issues in fisheries and aquaculture;
3. Fodder management for grass carp production;
4. Institutional strengthening in research priority-setting;
5. Integrated management of inland fisheries resources;
6. Conservation of indigenous species;

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1. Research Priorities

**Marine Capture Fisheries**
- Coastal fisheries management with emphasis on:
  * Stock assessment methods
  * Impact of destructive fishing methods on non-target species
  * Application of regulatory measures for management e.g. mesh size limit, closed season, exclusive devices
  * Impact of environmental degradation
- Assessment of off-shore and deep-sea fishery resources
- Reduction of post-harvest losses
- Improvement of fish processing technology with emphasis on:
  * Improvement of traditional processing methods i.e. drying, curing and fermentation
  * Quality control and food safety
  * Better utilization of low value fish by value added products
- Socioeconomic study of coastal fishing communities including
  * Fishing operation by low energy fishing techniques
  * Gender issues
- Improved fishing technology especially fishing gears and fishing vessels
- Improvement of catch statistics

**Inland Fisheries**
- Stock assessment of economically important species in river systems and lakes
- Ecosystem rehabilitation and stock management and enhancement in rivers and lakes
- Reservoir and lake fishery development and management
- Socioeconomic policies and regulatory measures
- Ecological studies related to fish kills

**Aquaculture**
- Genetic improvement of cultured fish species
- Aquaculture health management
- Fish nutrition and low cost feed development
- Technology of seed production with special reference to broodstock management in captivity
- Integration of aquaculture with agriculture, animal husbandry and horticulture
2. Research Capacity Building and Linkages among NARS

**Short Term Training**
- a) Broodstock and hatchery management of marine sp.
- b) Fishing technology
- c) Health management
- d) Database management
- e) Fish processing and quality control

**Long Term Training** (M.S. and Ph.D.)
- a) Fisheries management
- b) Oceanography
- c) Aquaculture genetics

**Institutional Strengthening**
- a) Information Exchange
- b) Exchange visits of researchers
- c) Collaborative programmes in research and training (mechanisms: national institutes, regional and international agencies)

3. Linkages between Aquatic Resources and Agricultural Research

- ICLARM to be focal point for Fisheries Sub-Group and APAARI
- Establish national focal point in each country and appointment of a National Fisheries Coordinator for APAARI
- Fisheries Sub-Group would include international and regional networks and organizations and national focal institute
SUWON MEETING OF FISHERIES AND AQUATIC RESOURCES RESEARCH MANAGERS: REPORT TO APAARI

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