



**REPORT OF THE  
THIRD GENERAL ASSEMBLY  
OF THE ASIA-PACIFIC ASSOCIATION OF  
AGRICULTURAL RESEARCH INSTITUTIONS  
AND  
EXPERT CONSULTATION ON NARS VISION  
TOWARDS FUTURE CHALLENGES AND  
OPPORTUNITIES FOR SUSTAINED AND ENHANCED  
PRODUCTIVITY AND FOOD SECURITY  
IN THE ASIA-PACIFIC REGION**



**Organised Jointly by  
FAO and APAARI  
at PCARRD, Los Baños, Philippines  
22-25 November 1994**





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# **PART I**

## **REPORT OF THE THIRD MEETING OF THE GENERAL ASSEMBLY OF THE ASIA-PACIFIC ASSOCIATION OF AGRICULTURAL RESEARCH INSTITUTIONS**

**(APAARI)**

**Held at  
PCARRD, Los Baños Philippines**

**25 November 1994**





## **ATTENDANCE**

The Third Meeting of the General Assembly of the Asia Pacific Association of Agricultural Research Institutions (APAARI) was held on November 25, 1994 at the Philippine Council for agriculture, Forestry and Resources Research and Development (PCAARD), Los Baños, Philippines. This meeting was held in conjunction with the Expert Consultation sponsored by FAO on "Future Challenges and Opportunities for Sustained and Enhanced productivity and Food Security in the Asia-Pacific Region" on 22-24 November, 1994. Thirteen Member Institutions from 12 countries, namely, Bangladesh, Fiji, India, Iran, Malaysia, Nepal, Papua New Guinea, Philippines (two institutions), Republic of Korea, Sri Lanka, Thailand and Western Samoa were represented by their Heads or in a few cases by their senior level representatives. Representatives of Associate Member Institutions, namely, CIMMIT, ICRISAT, IRRI, AVRDC and AIT, one observer each from ISNAR and Lao PDR, and resource persons from India and the Philippines participated. List of the participants is attached as Annexure-I.

### **AGENDA ITEM 1 - ADOPTION OF THE AGENDA**

Dr. Young-Sang Kim, Chairman of the Association, welcomed the participants to the Third General Assembly Meeting of APAARI and thanked PCARRD for hosting the meeting. He briefly introduced the agenda, which was unanimously adopted (Annexure II).

The Chairman requested Dr. R.S. Paroda, Executive Secretary of APAARI, to introduce the various agenda items, which were accordingly presented.

### **AGENDA ITEM 2 - ACTION TAKEN REPORT**

The Assembly appreciated that appropriate actions were taken on almost all the recommendations and action plans drawn at the Second General Assembly, 1992. These included:

- One ad-hoc and one regular meeting of the Executive Committee, respectively at FAO, RAPA, Bangkok, in July, 1993 and at Yogyakarta, Indonesia, in November, 1993.
- Bangladesh and Nepal joined as regular members of APAARI, thus raising the full membership strength to 17. However, Australia had indicated to withdraw from APAARI. The Assembly suggested that APAARI Secretariat should discuss the matter with Australia and avert the withdrawal. Indonesia and Japan had expressed interest in joining APAARI and the matter should consistently be followed up by the Secretariat to ensure joining of these two countries.
- It was gratifying that most of the IARCs in the Region and other concerned international institutions have joined as associate members. Considering the mandate and activities of ISNAR, the Assembly strongly urged that ISNAR should also become an associate member of APAARI to ensure synergistic interactions.
- Various publications such as Newsletter, Success Stories on baby corn in Thailand, tilapia farming in Philippines and hybrid rice in China, proceedings of APAARI-sponsored expert consultations, such as those on rice-wheat systems and assessment and transfer of technologies for sustainable agricultural and rural development were brought out. Directories for South-Asia and Oceania are under preparation. Likewise, success stories on cooperatives in dairy production and hybrid cotton in India are nearing completion.



- A brain-storming session was organised at RAPA, FAO, Bangkok on May 3-4, 1994 to discuss in detail the Perspective Plan of APAARI. It was attended by 18 experts, including 4 resource persons, namely Dr. H.K. Jain (India), Dr. Md. Sharifbin Ahmad (Malaysia), Dr. William D. Dar (Philippines) and Mr. Montri Rumakom (Thailand). Based on detailed discussions, the meeting had agreed that APAARI must have a perspective Plan both for the long term and the short term, developed on the basis of APAARI's mission and objectives and keeping in mind the new and emerging challenges and opportunities. The Perspective Plan has since been developed as elaborated under Agenda Item 3.

### **AGENDA ITEM 3 - APAARI PERSPECTIVE PLAN**

Dr. William D. Dar, Executive director of PCARRD, Philippines, as a consultant, had prepared a strategy document on APAARI Perspective Plan and presented the same at the Assembly. The highlights of the APAARI Perspective Plan are as below:

APAARI's mission is to promote the development of NARS in the Asia-Pacific region through inter-regional and inter-institutional cooperation.

Its overall objective is to foster the development of agricultural research in the Asia-Pacific Region through:

- promotion of the exchange of scientific and technical know-how and information in agriculture;
- encouraging the establishment of appropriate cooperative research and training programme in accordance with identified regional, bilateral, or national needs and priorities;
- assisting in strengthening research organizational and management capability of member-institutions; and
- strengthening cross-linkage among national, regional and international research centres and organizations, including universities, through involvement in jointly-planned research and training programmes.

To achieve the objectives of the APAARI, the following strategies and action plans were identified:

#### **Strategy 1. Regional Collaboration Network on Priority Programmes**

With the common desire for collaborative research involving specifically APAARI associate-members, results from such joint activities will prove to be beneficial from the standpoint of APAARI, it is imperative that regional programmes under its purview are in consonance with national initiative being pursued by member-countries. It is, therefore, timely for APAARI to develop appropriate strategies to support national and regional efforts by considering existing capabilities and providing synergistic support that is crucial to the speedy accomplishment of the goals. In supporting regional and national programmes, relevant aspects such as the economic integration under GATT, and sustainable development should be considered.

The following action plan could be implemented:

- 1.1 Select and support priority programme areas through networking arrangements that offer the greatest impact and benefit most to the Asia-Pacific Region
- 1.2 Establish criteria for prioritizing programme areas
- 1.3 Identify centres of excellence

## **Strategy 2. Information Networking of Centres of Excellence**

APAARI's mission is based on mutually reinforcing and collaborative relationships among a wide range of institutions. It intends to multiply its effectiveness by pooling efforts with other agencies under networking arrangements that exploit synergy of resources and capabilities and avoid duplication.

To meet the demands of today's fast-moving R&D technology-intensive business environs, access to international networks and databases are necessary. Thus, linkages to BITNET, INTERNET, and other regional and international networks should be established.

The following action plan could be implemented:

- 2.1 Establish databases
- 2.2 Ensure information sharing

## **Strategy 3. Developing Human Resources**

Human resources have been tagged as the most vital resource an organization could have because these are needed to supplement R&D support and investment programmes. Hence, as one of the major strategy, APAARI will pursue to strengthen strategic human resource development which includes nurturing of promising researchers, scientists, and research managers, among others.

The following activities were considered important:

- 3.1 Sensitize NARS to strengthen their efforts towards better human resources development
- 3.2 Establish an APAARI fellowship and post-doctoral programme

## **Strategy 4. Policy Advocacy**

Mechanisms have to be developed to communicate issues related to the advancement of agriculture and natural resources sectors. In this way, the involvement of APAARI in development could be enhanced not only through direct linking with the "downstream" clientele farmers, but also with the mainstream-the policymakers, to create a more conducive policy environment.

The aim is to make policy advocacy in agriculture and natural resources a continuing concern, and following action could be implemented:

- 4.1 Policy papers to be prepare and shared widely
- 4.2 Publication line

### **Strategy 5. Promoting Technology Transfer**

Dissemination of information, concepts, or ideas may cover publication of newsletters, success stories, workshops, and seminars. Promotion will be supported by information dissemination through multi-media, training, and linkage.

### **Strategy 6. Resource Generation**

R&D efforts require substantial amount of both financial and technical resources which usually compete with other priorities or equally important activities and functions.

Thus, efficiency in resource allocation and utilization has become a critical activity. Questions as to whom, when, and how resources are to be allocated become of vital considerations.

This strategy should be guided by the priority setting mechanisms stated in strategy 1. APAARI shall then embark on an aggressive resource generation strategy.

The following areas were considered important:

- 6.1 World watch
- 6.2 Stimulating interest from non-traditional donors

### **Strategy 7. Publication Enhancement**

APAARI shall pursue an aggressive publications programme. The aim is to document important events and research findings for wide readership. The following publications would in particular be brought out regularly:

- 7.1 Success Stories
- 7.2 Newsletter
- 7.3 Research Management Studies

## **AGENDA ITEM 4 - RESEARCH MANAGEMENT SYSTEM, PRIORITY SETTING MECHANISM AND RESEARCH IMPACT ASSESSMENT IN SOUTH EAST ASIA AND SOUTH ASIA**

Through consultancy arrangements, Dr. H.K. Jain (India) and Dr. William D. Dar (Philippines) had prepared the studies respectively on South Asia and South East Asia. The following salient points emerged from the presentations and discussions:

### **South Asia**

The South Asian countries have taken important policy decisions in the past 25 years to reorganise and strengthen their agricultural research management systems. An important outcome of these decisions has been the emergence of Research Councils with major responsibility for research policy, planning and coordination. The more powerful of these Councils also manage a greatly expanded network of federal research institutes and stations and provide funding and other support to the regional institutions in the states, specially in the organisation with a large number of nationally coordinated programmes. New research councils are being established in the different countries of South Asia to suit to specific settings of the

countries within the framework of their common approach to help modernise agriculture with the development of new packages of production technologies. Large investments have been made in all the countries of South Asia in creating a large research infrastructure and in training their scientists, whose number in several of these countries exceeds that in most other regions.

The Assembly noted the impact which these reorganised research systems have been able to make on agricultural production in a relatively short period of time by generating improved technologies. It was concluded that the new agricultural research systems have been highly successful in organising major programmes of applied and adaptive research, thus contributing to the widely acclaimed green revolution in these countries. At the same time, it was pointed out that these systems have not been very efficient in the use of their resources, specially their vast resources of highly trained scientific manpower. An analysis of the different research and management functions, which a research system is expected to perform, was made in this context. It became clear from this analysis that the performance of several of the Councils in such important functions as planning and priority setting, programme formulation and monitoring and management of personnel required a great deal of improvement.

An analysis of the future direction of the agricultural research management systems in the countries of South Asia revealed that the research councils of South Asia will have to see a major transformation in order to maintain their effectiveness in a changing agriculture and with their vastly increased size. The need will be for greater decentralization with the councils concentrating mainly on research policy and planning. A shift in research policy will be necessary taking into consideration the need to develop a more productive technology for the dry and marginal lands which have been neglected in the past, the rise of biotechnology which offers new opportunities to increase agricultural production and profit of small and marginal farmers in South Asia, and the economic reforms now underway in many of these countries leading to the emergence of a strong private sector.

## **Southeast Asia**

The agricultural research system in the southeast Asia had evolved from the relatively simple botanical gardens to a more complex and integrated research system called the NARS. The process was influenced by the changing development needs of a country and its agriculture sector. The long period of transformation from the botanical gardens to the establishment of the NARS had not been able to sustain the gains made from the earlier research efforts. Only with the establishment of NARS did the R&D efforts pick up.

Most NARS in the region have existed for over 20 years and investment in developing their R&D capability have been substantial. Considering these factors, increases in agricultural productivity could have been tremendous. However, the region still faces the problem of food shortages and subsistence agriculture. While R&D activities have been instrumental in increasing farm productivity, it has not been able to transform their benefit into a form that has positively affected the rural population.

Significant accomplishments have been made in developing the human and infrastructural resources of the NARS in the region. This has enabled most NARS to upgrade their scientific workforce through a strong and deliberate manpower development programme. The development of infrastructure have been enhanced to allow a system of work specialization and complementation in the technology development process. These efforts are quite strategic since these resources are the cornerstones of an effective research system.

Information is becoming an important resource for the NARS. Most NARS in the region, however, have not been able to establish a mechanism that allows for a centralized and systematic management of its information resources.

Moreover, the NARS in the region have not formally developed their capability to conserve and manage the vast genetic resources available in the region.

R&D priorities are influenced to a large extent by the politico-economic and social development priorities of a country. As such, R&D concerns of the NARS greatly reflect and are attuned to the developmental goals specific to their country. This scenario is quite logical, but it has not promoted an active interaction between development planners and the NARS. The tremendous knowledge base of the NARS has not been often tapped by development planners in determining national priorities particularly for the agriculture sector.

Funding of the agricultural R&D is derived mainly from the public sector funds. Overall, public sector support to agricultural R&D has been increasing which is still inadequate. Public sector support is quite understandable since R&D activities are considered as public goods. The availability of adequate funds in a sustained manner is essential to the continued effectiveness of the NARS. As such, the NARS has to exert more effort and it must readily justify its effectiveness to be more competitive in availing of public sector funds. In the long term, the NARS should not limit itself to use public sector funds but to consider other non-traditional sources of support to finance its activities.

The NARS in the region are quite adept at managing their internal and external linkages particularly with the IARCs and other sources of financial supports. These linkages nourish the NARS and provide opportunities to expand its agricultural capabilities. Inter-NARS linkage, however, in the region is very limited.

Generally, the impact of agricultural R&D in the region is inherent in the increasing agricultural productivity, intensifying land use, promoting biodiversity in the agricultural production environment, and improving the existing information base. Studies indicated that agricultural research investment generate high returns. The complexity, however, in which research impacts are determined suggests that agricultural R&D must combine with other factors supportive to agricultural development to achieve its desired effects.

Keeping in mind the past trend and the future challenges and opportunities, the Assembly endorsed the following recommendations for strengthening NARS in Southeast Asia and suggested that the same generally holds good for South Asia.

Agricultural R&D has traditionally played a significant role in a country's development effort. This is most often used as an argument in acquiring the necessary support for the conduct of R&D activities. As the southeast Asian Sub-region embarks of a new path of development, R&D efforts must keep pace with this changing scenario. While a lot has been done in the past, more opportunities have been created for the future. The challenges that lie ahead call for a firm and continued resolve, among the NARS in the region, to expand the role of agricultural R&D in the development efforts.

The bulk of agricultural R&D activities are geared towards increasing farm productivity. This is based on the perception that food insufficiency remains a major threat to the economies of the region. Although this was a problem in the past and still remains a development concern of most countries in the region, the need for focusing R&D efforts on averting the agriculture sector can hardly be overemphasized. These measures directly attack the root cause of rural poverty and should be given due priority.

The time lag between the development of a technology and its adoption by farmers is long. Often, the effectiveness of the technologies developed have been minimized due to this variable. To make R&D activities more effective, the process of technology development and adoption must be hastened.

A lot of innovative efforts have been done by some NARS in the region. Most notably, the organizational structuring done in Korea and the mandate setting done in Malaysia. These efforts can be adopted by the NARS in the region and modified accordingly to suit the specific circumstances prevailing in a particular country. More importantly, the conduct of R&D should be "businesslike", strategic, goal-oriented, and time bound. This will improve the impact of R&D activities particularly in transforming the technologies and information generated by these activities into profitable realities.

As a system, a NARS must continuously strive to improve the management of its resources. Through this, it can be able to prepare itself for the uncertainties of the future and exploit opportunities towards making it a more effective player in a country's development efforts. Specifically, improving management of information resources, genetic resources, fund sourcing, and linkages provide some avenues for growth among the NARS in the region.

The trend towards globalization should now be anticipated by the NARS in the region. This requires the strengthening of linkage among the NARS in the region which apparently is still limited. The agricultural production environment of the countries in the region and the economic development concerns faced are quit similar. The countries should collectively articulate their interests and, if possible, rationalize over R&D in the long term.

Ultimately, the role of agricultural sector R&D in terms of generating scientific knowledge must be sacrificed in favour of addressing a country's development efforts. It now becomes imperative to change the character of agricultural R&D in the region from a reactive problem-oriented into a more proactive endeavour that anticipates the need of an agro-industrial economy.

The Assembly reiterated that agricultural development can not be solely attributed to technological change. Agricultural R&D activities which produced technological change require a complex interplay of factors to make it successful. These factors are: the availability of appropriate package of technical support services like credit, market and post-harvest facilities among other, and the formulation of a package of relevant and complementing public policies. Thus, agricultural development is the end-effect of the synergism among several factors.

## **AGENDA ITEM 5 - MEMBERSHIP OF APAARI**

The Assembly noted that 16 countries, namely, Australia, Bangladesh, China, Fiji, India, Iran, Malaysia, Nepal, New Zealand, Pakistan, Papua New Guinea, Philippines, Republic of Korea, Sri Lanka, Thailand, and Western Samoa had become members of the Association. It also noted that from the Philippines, two organisations, namely, PCARRD and BAR were members. The Assembly expressed concern that Australia which joined APAARI in 1993 had withdrawn in 1994.

The Assembly appreciated that the payment of the membership fee by and large had been fairly regular. It urged that China, which has so far not paid membership fee for 1991, 1992, 1993 and 1994, may be requested to pay the arrears as soon as possible. For the year 1994, membership fee was due only from the Bureau of Agricultural Research, Philippines. The Assembly requested the Secretary to follow up with memberships. It note that Vietnam had expressed a desire to join the Association and urged the Secretary

to follow it up with the Vietnamese Government. The Assembly appreciated the interest of the Government of Lao PDR to join the Association although as an observer to start with.

The Assembly expressed satisfaction that most of the CGIAR centres which have activities in the Region and other major international research institutions in the Region have joined the Association as associate members. ISNAR could be approached again to join APAARI, as discussed under Agenda Item 2.

The Assembly urged the Secretariat to devise ways and means with the existing norms and rules of the association to generate additional membership and other contributions. It noted that, presently only the national agricultural research Apex body from each member country is a member of APAARI (other than from the Philippines), more national institutions should be encouraged to become members. To a query as to what should be the level of membership fee for additional institutions joining from individual member countries and what would be their voting position, it was clarified by the Secretariat that the statutes of the association provide for equal contribution from each member irrespective of its country affiliation and only one of the members from each country is entitled to vote. The Assembly felt that this point needs further examination and urged the Secretariat to prepare a note on this aspect and have it discussed at the next Executive committee meeting and the General Assembly meeting.

A statement of the membership fee contributions received as on 15th October, 1994 is given in Annexure-III.

## **AGENDA ITEM 6 - PROGRAMME AND BUDGET FOR 1995-96**

The Assembly was pleased to examine the audited summary statement for May 1991 to December 1994 and statement of account for the period 1.1.1994 to 30.9.1994 as given in Annexure-IV. It note that as against the budget provision of \$40,000 a total of \$13,621 was spent in 1993, whereas against the budget provision of \$78,000 a total of US\$ 33,260 was only spent upto 30th September, 1994. The Assembly further note that although the Association had undertaken several consultancy, training and workshop activities, no amount was spent from the Association fund during 1993 and only a limited expenditure was incurred from the Association fund during 1994. This was mainly due to the support received from the FAO to complement the APAARI activities. The Assembly greatly appreciated the continuing assistance from FAO and urged that the support should continue until APAARI became self-supporting. The Assembly unanimously endorsed the programme of work and budget for 1995-96 as presented in Annexure-V. It also granted ex-post facto approval for the increased expenditure of \$10,000 under the item miscellaneous for 1994.

## **AGENDA ITEM 7 - THE 4TH GENERAL ASSEMBLY**

The Assembly greatly appreciated and accepted the offer of the Government of Iran for hosting the 4th General Assembly of APAARI. It was emphasized that APAARI should strive to become self-sustaining and should be able to meet the cost of holding the Assembly and Executive Committee meetings. It urged the FAO to continue supporting organisation of such meetings by linking them with some expert consultations as in the past. The Assembly suggested that, in the spirit of TCDC, the countries hosting APAARI meeting should be able to provide the local boarding, lodging and transport expenses, whereas FAO/APAARI would meet the travel expenses.



The Assembly felt that, in view of inflation and the expansion of activities, the next General Assembly may wish to consider revision of the level of the membership fee. The Secretariat was urged to prepare a proposal giving full justification and put up the same at the next Executive Committee and Assembly meeting.

The exact date for holding the Assembly may be decided subsequently by the Secretariat in consultation with the Government of Iran.

### **AGENDA ITEM 8 - ELECTION OF THE CHAIRMAN, VICE CHAIRMAN AND THE EXECUTIVE COMMITTEE FOR 1995-96**

The Assembly, as per its Constitution, invited nominations for the posts of Chairman and Vice-Chairman as well as for members of the Executive committee, as term of the present Executive Committee would expire on 31st December, 1994. The Assembly unanimously elected the following office bearers of the APAARI Executive Committee for 1995-96.

Chairman	Philippines	Dr. William D. Dar
Vice-Chairman	Iran	Mr. Abbas Keshavarz
Member	1. Malaysia	Dr. Md. Sharif bin Ahmad
	2. Nepal	Dr. Shiva Bahadur Nepali
	3. Republic of Korea	Dr. Young Sang Kim
	4. Western Samoa	Dr. S.T. Semisi
Executive Secretary	FAO, RAPA	Dr. R.S. Paroda

It was decided that although Dr. Paroda had left the FAO/RAPA to join as Director General, ICAR, New Delhi, in the interest of the work and continuity, the Assembly would like Dr. Paroda to continue to serve as the Executive Secretary till the next General Assembly.

### **AGENDA ITEM 9 - LINKAGES WITH INTERNATIONAL CENTRES**

Dr. Mohamed S. Zehni, Director, Research and Technology Development division, FAO, Rome, gave a salient account of the need for strengthening the partnership of NARS with the CGIAR. He briefly alluded to the mission mode of functioning of the CG system and the transformation that the system is going through in the recent years. Referring to the recent study on the CGIAR by an independent group of noted scientists/research managers (headed by Conway), Dr. Zehni highlighted that the group is giving high priority to its partnership role with the NARS and to energise itself towards a Super Green Revolution which will be greener and would avoid the pitfalls of the first Green Revolution ushered in the mid-1960s.

Dr. Zehni emphasized the programme (matrix) approach for research management, especially when sustainability issues must be addressed through multidisciplinary approaches. While appreciating the developments of NARS and their successes in the Asia-Pacific Region, Dr. Zehni suggested that the NARS in the Region should play a greater proactive role in establishing linkages among themselves as well as with the IARCs. Some of the IARC's activities could be systematically devolved to the selected, stronger and willing NARS.

As regards the Region's representation on the CGIAR, Dr. Zehni briefly described the existing procedure of selecting the representatives. He observed that performances of the different regions as well

as of the representatives varied widely. Satisfaction was expressed on the choice of the representatives from the Asia-Pacific Region for the period 1995-98. Both the incoming representatives, Dr. Md. Sharif bin Ahmad (Malaysia) and Dr. Shiva Bahadur Nepali (Nepal) were present at the meeting and learnt of their responsibilities. Dr. Zehni briefly summarised the procedure for briefing/debriefing of the representatives and the role of FAO, TAC and APAARI in equipping them to meet their obligations.

## **AGENDA ITEM 10 - OTHER ITEMS**

### **Felicitations**

The Assembly felicitated Mr. A.Z.M. Obaidullah Khan (Assistant Director General, FAO, RAPA, Bangkok), Dr. M.S. Zehni (Director, Research and Technology Development Division, FAO, Rome), Dr. Md. Yosof bin Hashim (Former Director General of MARDI, Malaysia and the founding Chairman of APAARI and Dr. R.B. Singh (Research Development Centre, FAO, Rome, the Ex-Executive Secretary of APAARI) for their outstanding support to APAARI in its formative stages. The Assembly congratulated the present Executive Secretary, Dr. R.S. Paroda, for his excellent work and for giving needed directions and visibility to this emerging institution. It was also unanimously decided to request Dr. Paroda to continue working as Executive Secretary of APAARI at least upto the next General Assembly in order to have continuity and needed thrust to its programmes. Dr. Paroda could, for this purpose, open a sub-office of APAARI Secretariat at FAO Office in New Delhi for functional convenience. This would also enable APAARI to explore the possibilities of identifying in future potential Executive Secretaries from out of regular members of APAARI so as to make this institution truly self-supporting with possible support from FAO in providing logistic support to its office and other activities.

### **Bilateral Agreements**

The Assembly witnessed signing of bilateral agreements in the field of agricultural research and technology development between PCARRD (Philippines) on one hand and the ICAR (India), MARDI (Malaysia), and NARC (Nepal) on the other hand.

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## LIST OF PARTICIPANTS

### MEMBERS

#### BANGLADESH

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## ANNEXURE I

## NEPAL

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**ANNEXURE I**

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**INTERNATIONAL ORGANIZATIONS**

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## ANNEXURE I

**FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATION (FAO)**

- |  |   |
|--|---|
| 17. Dr. M.S. Zehni<br>Director<br>Research and Technology Development Division<br>FAO Headquarters<br>Via delle Terme di Caracalla 00100<br>Rome, ITALY  | Tel: (6) 52256844<br>Fax: (6) 52255731<br>Telex: 625852 FAO I |
| 18. Dr. R.B. Singh<br>Senior International Agricultural<br>Research Officer<br>Research and Technology Development Division<br>FAO Headquarters<br>Via delle Terme di Caracalla 00100<br>Rome, ITALY | Tel: (6) 52254327<br>Fax: 52255731<br>Telex: 610181 FAO I     |
| 19. Dr. John Dixon<br>Coordinator<br>FAO/UNDP/UNIDO Programme<br>FAO Regional Office for Asia<br>and the Pacific (RAPA)<br>Phra Atit Road, Banglumpoo<br>Bangkok 10200, THAILAND                     | Tel: 2817844<br>Fax: 2800445<br>Telex: 82815 FOODAG TH        |
| 20. Dr. Narong Chomchalow<br>Regional Plant Production Office (Industrial Crops)<br>FAO Regional Office for Asia<br>and the Pacific (RAPA)<br>Phra Atit Road, Banglumpoo<br>Bangkok 10200, THAILAND  | Tel: 2817844<br>Fax: 2800445<br>Telex: 82815 FOODAG TH        |

**INTERNATIONAL MAIZE AND WHEAT IMPROVEMENT CENTER (CIMMYT)**

- |   |   |
|---|---|
| 21. Dr. Jim Lothrop<br>Maize Breeder<br>CIMMYT-Regional Office<br>P.O. Box 9-188<br>Bangkok, THAILAND | Tel: (66-2) 579 0577, 579-4858<br>Fax: (66-2) 561 4057<br>Telex: 84478 INTERAG TH |
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**INTERNATIONAL CROPS RESEARCH INSTITUTE FOR THE SEMI-ARID (ICRISAT)**

- |  |   |
|--|---|
| 22. Dr. Y.L. Nene<br>Deputy Director General<br>ICRISAT<br>Patancheru<br>Andhra Pradesh 502 324, INDIA | Tel: 91 (40) 596161<br>Fax: 91 (40) 241239<br>Telex: 422203 ICRI IN |
|--|---|

**INTERNATIONAL FUND FOR AGRICULTURAL DEVELOPMENT (IFAD)**

- |  |   |
|--|---|
| 23. Mr. S.N. Saigal<br>Director<br>Technical Advisory Division<br>International Fund for Agricultural<br>Development (IFAD)<br>Rome, ITALY | Tel: 54591<br>Fax: 808 2338<br>Telex: 620330 IFADRM I |
|--|---|

**INTERNATIONAL RICE RESEARCH INSTITUTE (IRRI)**

- |  |                        |
|--|------------------------|
| 24. Dr. Klaus Lampe<br>Director General<br>International Rice Research Institute<br>Los Baños, Laguna<br>PHILIPPINES                 |                        |
| 25. Dr. Fernando A. Bernardo<br>Deputy Director General<br>International Rice Research Institute<br>Los Baños, Laguna<br>PHILIPPINES | Tel: 818-1926 loc. 705 |

**INTERNATIONAL SERVICE FOR NATIONAL AGRICULTURAL RESEARCH (ISNAR)**

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|--|--|
| 26. Dr. Byron Mook<br>Regional Coordinator, Asia<br>International Service for National<br>Agricultural Research (ISNAR)<br>P.O. Box 93375<br>2509 AJ, The Hague<br>THE NETHERLANDS | Tel: (31) (70) 3496100<br>Fax: (31) (70) 3819677 |
|--|--|

**M.S. SWAMINATHAN RESEARCH FOUNDATION**

- |   |  |
|---|--|
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|---|--|

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- |  |   |
|--|---|
| 28. Dr. Bouhthong Bouahom<br>Director of Livestock Adaptive<br>Research and Extension Division<br>Department of Livestock & Fisheries<br>Ministry of Agriculture and Forestry<br>Vientiane<br>LAO PDR. | Tel: (856-21) 215014<br>Fax: (856-21) 215015<br>Telex: 4324 VTELS |
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## ANNEXURE I

**RESOURCE PERSON**

- |   |  |
|---|--|
| 29. Dr. H.K. Jain<br>c/o Director<br>National Institute of Science Technology and<br>Development Studies (NISTADS)<br>Dr. K.S. Krishnan Marg, Pusa<br>New Delhi - 110012, INDIA | Tel: 001-571 4064<br>Fax: 011 575 4640<br>Telex: 031 77182 NSTD IN |
|---|--|

**WORLD BANK**

- |   |  |
|---|--|
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33. Mr. Rolando Labios  
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34. Dr. Rogelio C. Serrano  
Program Director  
Environment Research and Development Program  
PCARRD, Los Baños, Laguna  
PHILIPPINES

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**THE THIRD GENERAL ASSEMBLY MEETING OF THE ASIA-PACIFIC  
ASSOCIATION OF AGRICULTURAL RESEARCH INSTITUTIONS  
(APAARI)**

**Date: Friday, 25 November 1994**

**Venue: PCARRD, Los Baños, Laguna, Philippines**

**Time: 0900 - 1700**

**AGENDA**

- Item 1. Adoption of the Agenda
- Item 2. Action Taken Report - Dr. R.S. Paroda, Executive Secretary, APAARI
- Item 3. APAARI Perspective Plan - Presentation of Strategy Report - Dr. William D. Dar, Executive Director, PCARRD
- Item 4. Research Management Systems, Priority Setting Mechanisms and Research Impact Assessment in Southeast Asia and South Asia - Study Reports by W.D. Dar (PCARRD) and H.K. Jain (India)
- Item 5. A Report on the Membership of APAARI
- Item 6. Programme and Budget for 1995 and 1996 - Review and Approval
- Item 7. Holding of the Fourth General Assembly - Modalities and Venue
- Item 8. Election of the Chairman, Vice-Chairman, and the Executive Committee for 1995-96
- Item 9. Linkages with International Centres (including regional representation in the CGIAR)  
- Dr. M.S. Zenhi, Director, Research and Technology Development Division, FAO
- Item 10. Any Other Item

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## Asia-Pacific Association of Agricultural Research Institutions (APAARI)

Status of Contribution Received as on 15 October 1994  
(US Dollars)

Member Countries/ Institutions	Contribution due for 1991 received up to 15/10/94	Outstanding for 1991	Contribution due for 1992 received up to 15/10/94	Outstanding for 1992	Contribution due for 1993 received up to 15/10/94	Outstanding for 1993	Contribution due for 1994 received up to 15/10/94	Outstanding for 1994	Total Outstanding up to 15/10/94
Australia					6,000.00	0.00	0.00	6,000.00	6,000.00
Bangladesh							4,000.00	0.00	0.00
China	0.00	6,000.00	0.00	6,000.00	0.00	6,000.00	0.00	6,000.00	24,000.00
Fiji	2,000.00	0.00	2,000.00	0.00	2,000.00	0.00	2,000.00	0.00	0.00
India	5,976.00	24.00	6,024.00	-24.00	6,000.00	0.00	6,000.00	0.00	0.00
Iran	4,000.00	0.00	3,949.92	50.08	0.00	4,000.00	0.00	4,000.00	8,050.08
Malaysia	4,000.00	0.00	4,000.00	0.00	4,000.00	0.00	4,000.00	0.00	0.00
Nepal							2,000.00	0.00	0.00
New Zealand	6,000.00	0.00	6,000.00	0.00	6,000.00	0.00	6,000.00	0.00	0.00
Pakistan	4,000.00	0.00	4,000.00	0.00	4,000.00	0.00	4,000.00	0.00	0.00
Papua New Guinea	2,000.00	0.00	2,000.00	0.00	1,988.10	11.90	1,988.28	11.72	23.62
Philippines (PCARRD)	3,800.88	199.12	4,200.00	-200.00	4,000.00	0.00	4,000.00	0.00	-0.88
Philippines (BAR)			3,985.00	15.00	3,985.00	15.00	0.00	4,000.00	4,030.00
Republic of Korea	4,000.00	0.00	3,988.00	12.00	3,976.04	23.96	3,974.04	25.96	61.92
Sri Lanka	2,000.00	0.00	2,000.00	0.00	2,000.00	0.00	2,000.00	0.00	0.00
Thailand	4,000.00	0.00	4,000.00	0.00	4,000.00	0.00	4,000.00	0.00	0.00
Western Samoa	2,000.00	0.00	2,000.00	0.00	2,000.00	0.00	2,000.00	0.00	0.00
<b>Total</b>	<b>43,776.88</b>	<b>6,223.12</b>	<b>48,146.92</b>	<b>5,853.08</b>	<b>49,949.14</b>	<b>10,050.86</b>	<b>45,962.32</b>	<b>20,037.68</b>	<b>42,164.74</b>

<b>Total Received</b>	<b>187,835.26</b>
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## ANNEXURE IV

**SUMMARY STATEMENT OF APAARI**

31 May 1991 - 31 December 1993

(Amount in US Dollars)

ITEMS	RECEIVED	DISBURSEMENTS		BALANCE
		Budget	Actual Used	
1. Membership Fee	131,872.94			
2. Interest Income	4,428.10			
3. Profit and Loss on Transfer	203.60			
TOTAL	136,504.64			
4. Publications		5,000.00	736.80	
5. APAARI Secretariat Support				
5.1 Secretary/Technical Assistant		10,000.00	6,680.00	
5.2 Office Stationery & Postage		2,000.00	1,205.13	
5.3 Miscellaneous		5,000.00	4,998.94	
TOTAL		22,000.00	13,620.87	
				122,883.77


**Dr. R.S. Paroda**

Executive Secretary, APAARI


**Ms. O. Liengsemsuk**

Secretary &amp; Accountant, APAARI


**Mr. C. Sittimongkol**

Honorary Auditor

# SUMMARY STATEMENT OF APAARI

1 January - 30 September 1994

(Amount in US Dollars)

ITEMS	RECEIVED	DISBURSEMENTS		BALANCE
		Budget	Actual Used	
Amount B/F	122,883.77			
1. Membership Fee	49,962.32			
2. Donor - FAO	17,000.00			
3. Interest Income	1,672.91			
5. Profit and Loss on Transfer	95.40			
TOTAL	68,730.63			
6. Publications		5,000.00	4,980.00	
7. APAARI Secretariat Support				
7.1 Secretary/Technical Assistant		12,000.00	5,940.00	
7.2 Office Equipment, Office Stationery & Postage		3,000.00	1,845.97	
7.3 Miscellaneous		2,000.00	9,912.86	
8. Consultancy/Travel		10,000.00		
8.1 Special Service Agreement (SSA)			2,000.00	
8.2 Airtickets & DSA for Perspective Plan Meeting			2,866.00	
9. Expert/Consultation, General Assembly		5,000.00		
9.1 Expenses to Perspective Plan Meeting			689.07	
9.2 Third General Assembly			5,026.00	
		37,000.00	33,259.90	
				158,354.50

Amount in Saving Account (Dollar)

\$157,770.45

Amount in Current Account (Baht)

= Baht 14,601.32

\$584.05

## BUDGET FOR 1995 AND 1996

ITEMS	1995	1996
1. Publications (Newsletter, Directory, Technical Reports, etc.)	10,000	10,000
2. APAARI Secretariat Support:		
i) Secretary/Tech. Assistant	20,000	25,000
ii) Office Stationery & Postage	5,000	5,000
iii) Miscellaneous Items	10,000	10,000
3. Consultancy/Travel	10,000	20,000
4. Training/Selected Research Projects Support	10,000	10,000
5. Expert/Consultation General Assembly of APAARI (Partial Support)	15,000	25,000
<b>TOTAL</b>	<b>80,000</b>	<b>105,000</b>

Note: Amount in US Dollars





## **PART II**

### **REPORT OF THE EXPERT CONSULTATION ON FUTURE CHALLENGES AND OPPORTUNITIES FOR SUSTAINED AND ENHANCED PRODUCTIVITY AND FOOD SECURITY IN THE ASIA-PACIFIC REGION**

**Held at**

**PCARRD, Los Baños Philippines**

**22-24 November 1994**



## **RESOLUTION**

We the Members of the Asia-Pacific Association of Agricultural Research Institutions (APAARI)

Place on record our deep appreciation of the valuable contributions made by the CGIAR Centres in the generation of the green revolution technology in the past 30 years. We welcome the move to strengthen and restructure the GC System so that it can respond effectively to new and changing priorities of agriculture in the developing countries;

Recall the spirit of Bellagio where the vision of the founding fathers laid the moral and technological ground and made bold commitments for the green revolution which resulted in a quantum jump in food production and saved millions of lives;

Recognize the major investments made by developing countries in strengthening their NARS in the past 30 years and propose that the earlier principle of the CG Centre substituting for weak NARS will be increasingly replaced by one of greater partnership and devolution of responsibility to encourage them to become self and interdependent.

Realise the persistence of hunger and malnutrition coupled with creeping degradation of the life-support systems.

Resolve to work for a second green revolution by raising the genetic yield potential of major food crops and overcoming the emerging yield ceilings, mobilising for this purpose advances in science, especially in biotechnology and molecular biology.

Further resolve to help double food production in the next 20 years in the vast drylands, where most of the poor people in the developing countries make their living, through improving agricultural production by increasing effectiveness and efficiency of moisture conservation and water use, soil fertility restoration, and other relevant technologies.

Underscore the urgency of developing new paradigms in technology transfer and ecological science which lead to the conservation and improvement of the environment while achieving the necessary productivity gains and food increases.

Recognise that CG Centre and others have made significant contributions in the strengthening of NARS through their training programs and other institution building activities, and reaffirm continued support for these activities to equip NARS for future scientific challenges.

Realize that with the more widespread use of Intellectual Property Rights, the CG Centre will continue to hold in trust the world's plant genetic resources and make them freely available to scientists in the developing countries, and to all others for the purpose of public good research.

Commit to provide more stable and longer term funding support for the CG Centre so that they could produce the technologies which will be needed to resolve the increasingly complex problem of enhancing productivity while preserving the natural resources base.

# FUTURE CHALLENGES AND OPPORTUNITIES FOR SUSTAINED AND ENHANCED PRODUCTIVITY AND FOOD SECURITY IN THE ASIA-PACIFIC REGION

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## NARS VISION

### INTRODUCTION

1 An Expert Consultation on NARS Vision towards Future Challenges and Opportunities for Sustained and Enhanced Productivity and Food Security in the Asia-Pacific Region was jointly organised by FAO and APAARI at the Philippine Council for Agriculture, Forestry and Natural Resources Research and Development (PCARRD), Los Baños, on 22-24 November 1994. Head of NARS from 14 countries and representatives of seven CGIAR Centres, the World Bank and IFAD, four FAO experts and a number of resource persons participated. List of participants is given in Annexure I of Part I of this report. Eleven invited papers were presented and discussed. A copy of the programme is given in Annexure I.

### THE CHALLENGES

2. The Consultation expressed deep concern that chronic hunger and poverty persist in the region, especially in South Asia where a quarter to one-third of the population is suffering from hunger and poverty. If the current trends of food production and consumption continue, the region would not be able to meet the projected demand arising from population growth, income increases and urbanization. It noted that the future production goals will be confronted with shrinking cropland areas in this land-hungry region, declining access to forests and biodiversity, degrading natural resources, deteriorating climate and increasing incidence of rural poverty, especially in resource-poor areas. The growth rates of major food production systems in the region were declining, signaling the setting in of the fatigue in the "green revolution".

### THE PREMISE

3 The Consultation noted that the twin food security challenges faced were increasing food and agricultural production within the countries and expanding the economic access to food. It emphasized that agriculture holds the key to national development; employment generation, sustained growth and poverty alleviation, environmental protection and agricultural intensification were inextricably linked, and the synergism among these called for comprehensive adjustments, in policies, priority setting, resource development and deployment, and establishment and management of linkages and collaboration at national, regional and international levels.

4. The Consultation expressed satisfaction that even though the resource base was shrinking, agricultural development in the region was dynamic and resilient. Agricultural production and productivity had more than doubled during the past 30 years, yields of major cereals, such as rice, wheat and maize, had tripled and even quadrupled. Several NARS have matured and developed capabilities, including the cutting-edge technologies, and were evolving, developing, transferring and commercializing new technologies. The IARCs, in collaboration with the NARS, had played an important role in ushering in the green revolution in the region.

5. The Consultation observed that extensive, untapped and underutilized potentials both in technology and resources existed in the region, especially its rich ecosystems, biological diversity and the abundant labour force.

#### **NEW PARADIGMS IN RESEARCH, TECHNOLOGY DEVELOPMENT AND TRANSFER**

6. The Consultation recognized that research and technology is the engine of agricultural growth, and considering the past trend, the Consultation strongly urged that the future research and technology development must be based on the integrated application of the principles of food security, nutritional adequacy, enhanced productivity, ecological and environmental sustainability, economic viability, job security, and social equity both in gender and economic terms. It also recognized that the main determinants of sustainable agricultural development are a sound and stable forward looking and market based policy environment; and eco-sensitive, client-oriented system of research, technology generation, adaptation and dissemination; and a strong institutional framework comprising a growing coalition of national, regional and international centres of excellence, national research systems, extension services and farmer and peoples organizations. It emphasized that in order to have the desired impact on the agricultural sector, research would need to be focused, demand driven, dynamic and relevant, and its management efficient, cost effective and transparent.

#### **NEW VISION FOR RESEARCH AND TECHNOLOGY DEVELOPMENT**

7. The Consultation urged that in order to realize the new paradigms, a new or readjusted global vision, which is people-centred, should be developed.

### **THE CGIAR VISION**

8. The Consultation commended the eminent role of the CG System in creating the green revolution whose impact was most pronounced in this region. It welcomed the initiative of the CGIAR Chairman and his colleagues in the Group to reform and revitalize the system, and reorient its vision, research agenda, governance and financial arrangements. The Consultation confirmed the continued need for a dynamic and responsive international agricultural research and technology development and transfer system, and of stronger partnership and cooperation with CG System. It particularly appreciated the emphasis on interdependence of national and international systems, the mutual reinforcement, the envisaged synergism, and true globalization of research and technology transfer.

9. The Consultation underlined that strong NARS would constitute a strong international research system, hence the need for building strong NARS was emphasized. It strongly supported the move for the CGIAR to be more open and appreciated its emphasis on the partnership and catalytic role. In this context, the call for more and more developing countries joining the System to expand the consultative and decision-making process was greatly appreciated by the consultation. However, it cautioned that in doing so, the informal nature of the System should not be sacrificed.

10. The Consultation agreed with the system's basic premise and supported the scenario two, which states that the developing countries should greatly increase their own food production so as to largely meet their own needs, including the needs of the poor, investing in agricultural research and development as part of a larger development process.

11. The Consultation greatly appreciated the system's move toward the next "Supergreen Revolution" which must take into account the socio-economic demands of poor households, comprehensive food security, sustainability, resource conservation, equity, and rainfed areas where most of the poor live. The Consultation exhorted the CG System to use molecular biology and biotechnology to break the yield ceilings and to insulate the production systems from biotic and abiotic stresses.
12. While generally agreeing with the vision and principles for the future research, the consultation felt that there was a need to define these concepts more clearly. Partnership was the most important principle and should be reflected accordingly in words and actions of the system. The Consultation suggested that "partnership" and "ownership" should not be based and judged only in terms of monetary contributions. The contributions of NARS manifested in many different ways, such as human resources, intellectual and technical inputs, genetic resources and other materials and varying logistic supports and services, should be duly recognized.
13. The Consultation suggested that in promoting linkages among concerned actors, the private-public sector link was timely and a welcome step and should be based on mutual trust and true partnership.
14. The Consultation felt that the term "Subsidiarity" gives a notion of "hierarchy" and "subordination", and would be counterproductive to the "partnership" role. The Consultation preferred the word "devolution" over "subsidiarity" and recommended that devolution should be effected through mutual consultation and consideration based on need, opportunity, cost effectiveness, efficiency, and capacity, and not by default or on an ad hoc basis.
15. The Consultation strongly recommended that the devolution of responsibilities and accountabilities to NARS must be coupled with enabling funding mechanisms. An action plan for devolution with clearly defined timescale, resources allocation, responsibilities, etc. should be developed by the NARS and the CG System. APAARI and other such associations/organizations should play an active role in achieving effective and efficient sharing of responsibilities among NARS and the CG System.
16. The Consultation noted that during the past two decades or so several of the NARS in the Region have attained capability for undertaking conventional genetic improvement work and are deeply involved in germplasm enhancement and breeding activities. It recommended that the CGIAR centres should gradually devolve, to the extent possible and feasible, the conventional breeding and germplasm enhancement activities to the capable NARS.
17. The Consultation cautioned that, while moving so-called "up-stream", the Group should not lose sight of the "downstream" working and the needs of resource-poor farmers, especially through networking arrangements involving NARS and regional association/programmes, such as APAARI.
18. The Consultation cautioned that even for "upstream" research, comparative advantages of selected NARS and IARCs should be examined keeping in mind the resources availability. Regional centres of excellence could be developed at selected NARS and their outputs shared freely throughout the region through TCDC arrangements.
19. The Consultation noted that CG System would be giving higher priority to cereal production for assuring food and economic security. But, noting the increasing emphasis on sustainability and nutritional adequacy, international research on selected major legumes and root crops should not be ignored. Further,

it recognized that commodity-centre and resource-centre research orientations are not mutually exclusive. In fact, commodity research must centre around the resources management and the resources are to be managed for commodity and the farm productivity.

20. With the aim of attaining household food security and increasing emphasis on competitiveness and free market system, research and technology for system research and technology for post-harvest handling, value addition integrating product conversion, processing and marketing is yet another priority area which should receive CG's support.

21. The Consultation generally approved the programme approach, the global and eco-regional action programmes and research agenda. In doing so, it recognized that while the NARS will be making greater contribution to the eco-regional agenda, the CGIAR resources including finances should be proportionately allocated to such programmes. In particular, it endorsed the eminent role of CG in information management.

#### **VISION OF THE NARS ON AGRICULTURAL RESEARCH**

23. The Consultation emphasized that the NARS should also actively participate in the process of readjusting their visions, their policies, strategies and priorities with a clear and coherent sense of future direction, goals translated into a relevant research agenda and worked closely with various partners at national, regional and international levels not only for sharpening their research agenda but also for receiving much needed attention and support from donors, policy makers and the government. The NARS vision should be interfaced with the one proposed for the CG. It recommended that the capacities of the NARS should particularly be strengthened in research policy formulation and priority setting mechanisms.

24. Emphasizing the need for maintaining congruency between increased productivity, sustainability and food security, the Consultation recommended that the NARS should bring a systems perspective in agricultural research, technology development and transfer to ensure judicious and sustainable use of natural resource base leading to increased commodity/system production and factor productivity. In this context, the consultation recommended that while genetic amelioration will continue to make significant contribution, greater attention must be paid to production management, especially efficient use of resources, such as water, land and agro-chemicals. Interdisciplinary technologies, such as IPM, IPNS, integrated soil and water management, integrated farming system, etc., should receive high priority.

25. Synergism between information base and material technology should be promoted. The necessary changes in the extension and technology transfer services should be brought about to ensure the synergism. The problems and potentials of both well-endowed (irrigated lands) and poorly endowed (drylands) areas should be clearly identified and addressed to. Appropriate technological and policy interventions should be effected. Since rainfed agriculture had received limited attention in the past, the technology development and transfer needs of such areas, which are generally inhabited by resource-poor farmers, should assume high priority.

26. The Consultation underscored that farmer-centred participatory research and farming systems approach for technology generation and transfer based on the integration of the ecological prudence and employment intensity of traditional farming system should be emphasized. The role of women in the farming system and appropriate technologies for improving their work efficiency and reducing the drudgery should be augmented.

27. The Consultation recognized that following the GATT agreement, the NARS are under pressure to develop appropriate Intellectual Property Right systems to take advantage of the liberalized trade



environment and recommended that action at national, regional and global levels should be taken to ensure that the regulatory measures facilitate the application of science and technology for national, regional and international public goods. The NARS should give greater attention to related policy issues and strengthen their capacities in policy research.

28. Recognizing that the rate of return on the investment on research and technology has been extremely high, and noting that the support to R&D system both at the national and international levels has been declining, the Consultation recommended that the trend should not only be reversed but support to R&D should be significantly augmented to meet the challenges of ensuring accelerated productivity coupled with sustainability.

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## **PROGRAMME**

### **Tuesday, 22 November**

0900 - 0930            Registration

0930 - 1030            Visit of PCARRD

#### **Session I: Opening Session**

1030 - 1040            Welcome by Dr. William D. Dar, Executive Director, Philippine Council for Agriculture, Forestry and Natural Resources Research and Development (PCARRD), Los Baños, Laguna, Philippines

1040 - 1055            Statement by Dr. M.S. Zehni, Director, Research and Technology Development Division, FAO Headquarters, Rome, Italy

1055 - 1110            Statement by Mr. A.Z. M. Obaidullah Khan, Assistant Director-General and FAO Regional Representative for Asia and the Pacific, FAO RAPA, Bangkok, Thailand

1110 - 1130            Inaugural Speech by Hon. William G. Padolina, Secretary, DOST, Government of the Philippines

1130 - 1140            Objectives and Agenda and Vote of Thanks by Dr. R.S. Paroda, Regional Plant Production and Protection Officer, FAO RAPA and Executive Secretary, APAARI

1140 - 1145            Group Photograph

1145 - 1315            Lunch Break

#### **Session II: Strategies and Options for Sustainable Agriculture and Food Security**

1315 - 1400            Challenges and strategies for sustainable agriculture and food security with special reference to the Asia-Pacific Region by Dr. Y.L. Nene, Deputy Director-General of ICRISAT

1400 - 1445            Dynamics of policies and priorities of sustainable agriculture and food security in the region in view of the fast changing world scenario of trade, conservation and climate by Dr. R.S. Paroda, Director-General, Indian Council of Agricultural Research (ICAR), New Delhi, India

1445 - 1515            Tea Break

1515 - 1600            New paradigms in generation and transfer of technologies for increased agricultural productivity and sustainability in the Asia-Pacific region by Dr. R.B. Singh, Senior Agricultural Research Officer, AGRR, FAO, Rome, Italy

1600 - 1630            Experiences of the Asian FARM (Farm-Centred Agricultural Resource Management) Programme by Dr. John Dixon, Coordinator FAO/UNDP/UNIDO Programme, FAO RAPA, Bangkok, Thailand

## ANNEXURE I

1630 - 1730	Overall Discussion on the Session Topic
1800	Reception and Dinner

**Wednesday, 23 November 1994**

**Session III: Vision of National and International Systems on Research  
and Technology for Sustainable Agriculture and Food Security**

0900 - 0915	Introductory remarks by Dr. Mohamed S. Zehni, Director, AGR, FAO, Rome
0915 - 1000	CGIAR's Vision towards sustained and enhanced productivity and food security. Dr. John Doyle, Agricultural Research Unit, World Bank, Washington D.C., USA
1000 - 1030	Development of a vision for NARS on International Agricultural Research by Mr. S.N. Saigal, Director, Technical Advisory Division, IFAD, Rome, Italy
1030 - 1100	Tea Break
1100 - 1145	Vision of NARS towards sustainable agriculture and food security and their partnership with CG and other concerned international systems by Dr. K.N.N.S. Nair and Dr. M.S. Swaminathan, M.S. Swaminathan Research Foundation, Madras, India
1145 - 1300	Overall Discussion on the Session Topic
1300 - 1430	Lunch Break
1430 - 1530	Visit of IRRI
1530 - 1600	Tea Break

**Evening Session**

1600 - 1800	Hybrid Rice network - Panel Discussion
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**Thursday, 24 November 1994**

**Session IV: New Approaches for Technology Assessment and Transfer  
for Enhanced Production and Food Security**

0900 - 0945	NARS Vision Towards Future Challenges and Opportunities for Enhanced Productivity and Food Security in Pakistan / Participatory Processes and Approaches and Empowerment of Farmers for Technology Development and Transfer by Dr. C.M. Anwar Khan, Chairman and Muhammad Fiaz Joyia Technical Staff Officer to Chairman, PARC, Islamabad, Pakistan, (presented by Dr. M.S.U. Chowdhury, Executive Vice-Chairman, Bangladesh Agricultural Research Council (BARC), Dhaka, Bangladesh)
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**ANNEXURE I**

0945 - 1030	The Sustainable Agriculture and Natural Resource Management Collaborative Research Support Program (SANREM CRSP) and Use of Indicators for Sustainability by Dr. Rogelio C. Serrano, Program Director, Environment R & D Program, PCARRD
1030 - 1100	Tea Break
1100 - 1230	Overall Discussion on the Session Topic
1230 - 1400	Lunch Break
1400 - 1500	Preparation of Report

**Session V: Plenary**

1500 - 1700	<p>Presentation and adoption of recommendations and report of each technical Session covering:</p> <ul style="list-style-type: none"><li>(i) Actions to be taken by NARS</li><li>(ii) Actions to be taken by FAO, CGIAR and other international organizations</li><li>(iii) Regional cooperation for enhanced and sustained agricultural production and food security</li></ul> <p>Closing of the meeting</p>
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**Evening Session**

1730 - 1900	Sustainability of regional research networks, such as FLCGNET, TAMNET, etc.
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