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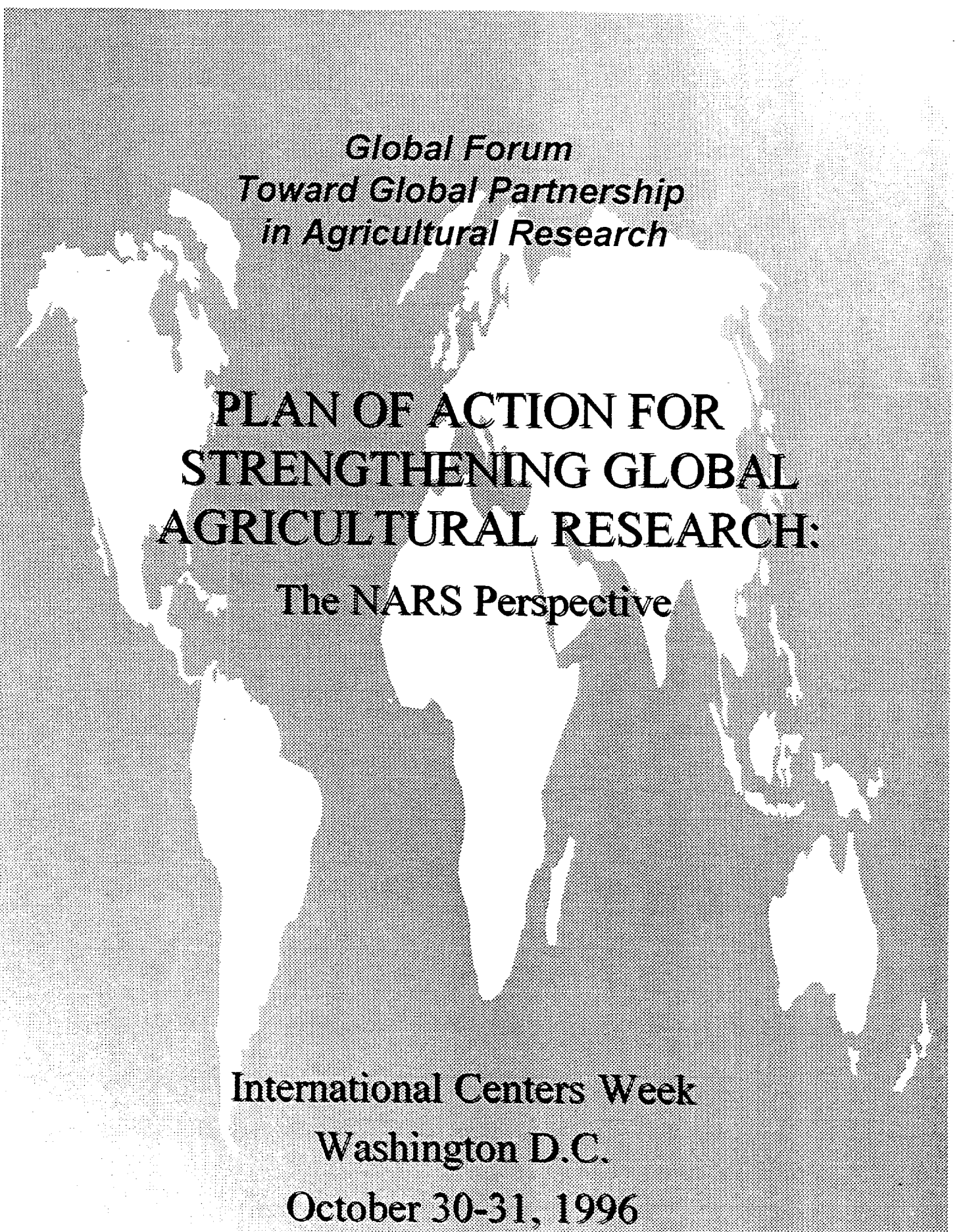
**Plan of Action for Strengthening Global Agricultural Research:
The NARS Perspective**

The attached report was prepared by a working group comprising the representatives of the regional fora for Sub-Saharan Africa, Asia and the Pacific, West Asia and North Africa, and Latin America and the Caribbean. The report will be presented and discussed at the Global Forum during the session on the Operational Dimensions of Strengthening Global Partnerships.

The report is circulated as the NARS input into the discussions leading to the *Declaration and Action Plan for Global Partnerships in Agricultural Research*.

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*Global Forum
Toward Global Partnership
in Agricultural Research*

**PLAN OF ACTION FOR
STRENGTHENING GLOBAL
AGRICULTURAL RESEARCH:**

The NARS Perspective

International Centers Week

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TABLE OF CONTENTS

1 PREAMBLE	2
2 BACKGROUND AND PROCESS	2
2.1 Background	2
2.2 The Process	3
3 GOALS AND ACTIONS	3
3.1 Strengthening and Building the Capacity of NARS to Generate and Transfer Appropriate Technology to Farmers	4
3.2 Improving Priority Setting to Better Reflect NARS views in the Global Agenda	5
3.3 Strengthening NARS\NARS Partnerships and their Fora	6
3.4 Developing Partnerships Between NARS and Other Participants in the Global Agricultural Research Community to Increase Efficiency and Efficacy in the Implementation of the GAP	7
3.5 Securing Financial Support to Sustain the GPA and its New Partnerships	8
4 REGIONAL DETAILED ACTION PLANS	9
4.1 Latin Arnerica and the Caribbean	10
4.2 Asia and the Pacific	12
4.3 Sub-Saharan Africa	14
4.4 West Asia and North Africa	16
5 NARS CONTRIBUTION TO THE DECLARATION OF GLOBAL PARTNERSHIP IN AGRICULTURAL RESEARCH FOR ENSURING FOOD SECURITY, POVERTY ALLEVIATION, AND SUSTAINABLE NATURAL RESOURCE MANAGEMENT	18
6 LIST OF ACRONYMS	20

PLAN OF ACTION FOR STRENGTHENING GLOBAL AGRICULTURAL RESEARCH: THE NARS PERSPECTIVE

1.PREAMBLE

The Global Plan of Action(GPA) represents the culmination of a deliberative process to strengthen global agricultural research.¹ It provides an overview based on the Detailed Action Plans (DAPs) prepared by the regional fora of Sub-Saharan Africa, Asia and the Pacific, West Asia and North Africa, and Latin America and the Caribbean. The GPA is the product of a working group comprising the representatives of these regional fora and of the facilitating group of agencies, which was convened by IFAD in Rome from 26-30 August 1996 in pursuance of the objectives set at the NARS Consultation at the Jakarta Mid-Term Meeting (MTM). The GPA is being presented to the Global Forum as the NARS perspective of the operational dimensions of strengthening global partnerships in Agricultural Research. The GPA provides a framework for systematic actions at the various levels of the Global Agricultural Research System to strengthen NARS and the partnerships amongst themselves, with the CGIAR system and with partners of the international research community for the implementation of the shared vision for sustainable agriculture, equitable development and conservation of the natural resources. Finally, the spirit of the GPA is embodied in a Declaration of Principles of the NARS (Chapter 5), which will be presented at the Global Forum, in October, 1996.

2. BACKGROUND AND PROCESS

2.1 Background

Despite all the technological advances of this century, including those of the Green Revolution, the world is still faced with increasing poverty and more than 800 million people remain undernourished. With the population likely to increase by over two billion by 2020, and the problems of growing natural resource degradation, agricultural research is faced with major challenges: to improve farm family income to alleviate poverty, increase food production, provide employment opportunities for the resource poor and landless farmers, to ensure household food security, while conserving the natural resource base. Many of the advances in improved technologies have bypassed resource poor farmers, because these have not been relevant to their needs or taken sufficient account of the risks the farmers face. New tools such as biotechnology and the advances in information technologies provide opportunities to address this challenge. However, to ensure that this is done with both equity and a gender perspective, the approaches to technology generation and transfer have to be reoriented. In this regard, researchers and extensionists and end users will work in a participatory manner to increase production and productivity in a sustainable way, allow the benefits of research to reach the poorest, and help to alleviate poverty and vanish hunger from the face of the earth.

¹ In this document Agricultural Research is understood to include crop, livestock, forestry, fishery, and natural resource management research.

The world is now faced with a much more complex task to address these challenges and to do it with limited financial resources. The NARS and the CGIAR in developing a new vision, have recognized that this can only be done by forging strong partnerships between all stakeholders involved in agricultural research. All partners will need to work in a complementary fashion, achieving economies of scale and scope and drawing on their respective comparative advantages to meet the challenge in a cost effective way.

2.2 The Process

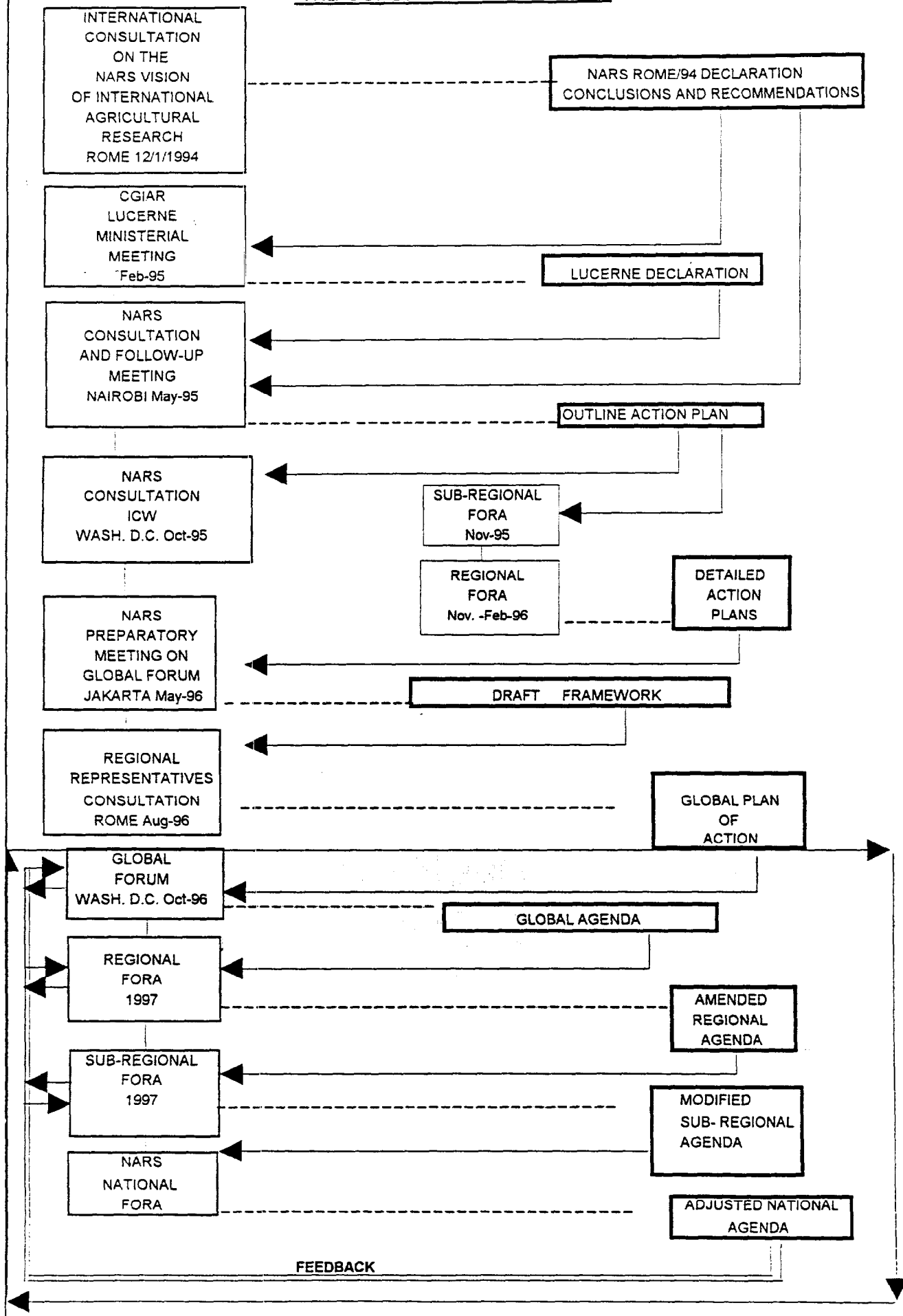
A deliberative renewal process (Figure 1) to embrace the new vision of a global agricultural research system and address the large and complex challenges of reducing poverty, ensuring food security while conserving the environment, through strong cost effective partnerships and a comprehensive global research agenda, was initiated in December 1994. This international consultation process that began with a "NARS' Vision of International Agricultural Research" convened by the International Fund for Agricultural Development (IFAD), produced a declaration and recommendations to strengthen NARS-CGIAR partnerships and has reached out to NARS and their fora to develop effective mechanisms for successfully implementing this innovative, far reaching and much needed new global agenda. It was followed by a Ministerial Level Meeting in Lucerne, Switzerland, in February, 1995, convened by the co-sponsors of the CGIAR. Following adoption of the Outline Action Plan, that includes Advanced Research Institutes (ARIs), at International Centers Week, 1995 (ICW 95), meetings of each of the Regional Fora took place and drew up DAPs for each region and/or subregion. These were discussed at the Jakarta MTM in May 1996 in preparation for the Global Forum to be held in Washington during ICW 1996. This continuing process brought together the regional DAPs into a GPA to which the four regional fora are fully committed. The spirit of the GPA which will be presented for adoption at the Global Forum is embodied in a Declaration of Principles. This declaration will be submitted to the Global Forum for endorsement and presentation at the World Food Summit in November, 1996.

3.GOALS AND ACTIONS

The success of the GPA is dependent on vigorous partnerships between all parties concerned with generation and transfer of agricultural technology. Therefore, mechanisms for strengthening these partnerships are central to achieving all the goals of the GPA. The different types of partnerships (i.e., contractual, cooperative, collaborative, and collegiate) and their terms of reference need to be clearly defined with solid objectives and strategies. Five levels of effective partnerships are needed: 1) with extension services and farmers, 2) within NARS, 3) between NARS themselves, 4) between NARS and the IARCs, and 5) with ARIs and other centers of excellence. The five goals of the Global Plan of Action are:

1. Strengthen and build the capacity of NARS to generate and transfer appropriate technology to farmers.
2. Improve priority setting to better reflect NARS views in the global agenda.
3. Strengthen NARS/NARS partnerships and their Fora.

**THE NARS-CGIAR PARTNERSHIP INITIATIVE:
THE CONSULTATIVE PROCESS.**



4 Develop partnerships between NARS and other participants in the Global Agricultural Research community to increase efficiency and effectiveness in the implementation of the GPA.

5. Secure financial support to sustain the GPA and its new partnerships.

The nature of these partnerships will now be discussed under the respective goals.

3.1 Strengthening and Building the Capacity of NARS to Generate and Transfer Appropriate Technology to Farmers

The adequate implementation of the GAP depends on strong partnerships. However, many NARS are still weak and therefore, an essential prerequisite to the implementation of the GPA is to strengthen them. This will be done by increasing the human resource and institutional capacities, broadening their constituency, improving coordination within NARS, and overcoming serious financial constraints they are currently facing.

NARS and their partners will jointly define institution building, identify critical areas for action, set objectives for strengthening individual NARS and their Fora, and design strategies to meet them. Common salient topics at the institutional level include: infrastructure development, research and extension priority setting, policy analyses, budget design and implementation, and monitoring and evaluation at all levels. In human resource development, common issues include leadership development, improved managerial and administrative skills, assessment of training needs, degree training and specialist courses for staff and farm leaders.

The broadening of NARIs will be encouraged, especially in those countries where they are spread over different ministries. This will ensure that the partners involved with natural resource management, including forestry, fisheries, and environmental conservation agencies are not left out. Broadening the NARS and their fora is a major goal of the GPA. It will involve all the stakeholders concerned with technology generation and transfer (NARIs, universities, agribusiness, foundations, NGOs, extensionists, and farmer associations). An effective national research and extension body is required to build and coordinate the NARS. Policy makers from the planning and finance ministries, and other relevant institutions must be represented in this body to ensure that the need for resource allocation to the sub-sector is adequately addressed. At present, it is recognized that the NARIs have a comparative advantage for providing leadership to this coordinating body. This broadening process is progressing rapidly in most countries and will continue to evolve emphasizing complementarity and bringing forth the comparative advantage of each partner in every research issue or program.

The coordinating body will have the responsibilities to review research and extension programs and to improve research - extension - farmer linkages within the country. Linkage mechanisms that often exist but fail to function effectively will be reformed and given the means to operate more effectively, including the right incentives to bring together all participants at planning, implementation, reporting, and evaluation stages. This will require well-designed and intensive short-term training to reorient all parties involved, including sensitizing members of local administrations. It also

demands socio-economic and farming systems diagnostic surveys, conducted in a fully participatory fashion with farmers, to identify constraints and opportunities, and to define recommendation domains. Special attention will be given to reviewing the existing coping strategies of the poorest households. They will be assisted to adopt suitable technologies to improve their livelihood. Working linkages with farmers' organizations, NGOs, and agribusiness, to improve input supply, marketing and adding value by introducing small-scale processing at the farm level will be encouraged.

Reorientation of stakeholders' programs will require incentives as well as training. NARS will be encouraged to give careful attention to identifying these incentives and using them to effectively institutionalize new mechanisms and introduce reward systems related to the desired results.

Most NARS do not have access to advanced communication and information systems as those used by the CGIAR system. This growing gap in communication technology between NARS and all other partners is a severe handicap to improved partnerships. Just as important, is the creation of effective communication systems between NARS themselves and their fora. This issue has to be addressed with top priority. Partnerships already in place or foreseen, will require and benefit from frequent interactions between the partners. In this respect, the Integrated Voice and Data Network's (IVDN) architecture and accessibility need to be revised, to enhance NARS/Regional Fora/CGIAR/IARC/ARI communications. There is also a need to develop, at all levels of the global research system, management information systems to accelerate and improve the sharing of information of on-going research programs, research results, and available technologies. These systems will include among others: socio-economic, research, extension and administration modules.

Many NARIs cannot optimize the use of the available manpower and infrastructure effectively because of shortage of recurrent funds. More funds are also needed to expand relevant programs to meet pressing local, regional, and global challenges. Impact has to be demonstrated to shape policy makers views on the need to increase investment in agricultural research and extension. To relieve recurrent funding constraints and make research and extension sustainable, governments should explore traditional and innovative funding modalities to, such as allowing research institutes to have revolving funds from the sale of produce, to carry out research on a fee basis for the private sector, and privatizing appropriate phases of crop or intensive livestock research, whenever feasible, to free up funds for those enterprises that will always require public funding.

3.2 Improving Priority Setting to Better Reflect NARS Views in the Global Agenda

The basic idea is to increase the capacity of NARS in priority setting to improve the national, subregional, regional and global research agendas. Subregional and/or regional priority setting is also the key mechanism to facilitate the choice for collaborative research at these levels and establishing the comparative advantages of countries when making decisions on sharing responsibilities for implementing the research agendas.

A second goal, is to ensure that the CGIAR agenda itself better reflects the concerns of the NARS. This will be achieved through coordinating mechanisms between regional fora and the CGIAR for each level of priority setting (the IARCs, the TAC, and at the CGIAR). Regional fora will also set up review mechanisms with appropriate ARIs to ensure that research priorities on non-CGIAR commodities are also addressed. Once this is accomplished, it will ensure that both global and CGIAR agendas become demand driven and better reflect the farmers' and endusers needs. It has also been agreed that current and future priorities at the national and regional level will reflect the overarching objectives of poverty alleviation, ensuring food security, and pursuing environmental sustainability.

3.3 Strengthening NARS/NARS Partnerships and their Regional Fora

A third important goal is to ensure NARS-NARS collaboration through sharing responsibility, networking, and collaborative research programs. For groups of smaller countries, integrated research systems will be an alternative to avoid duplication and to ensure synergy by addressing research challenges collectively.

Regional and subregional fora have evolved differently in the four regions, and it is agreed that this is not a constraining characteristic, provided that each region clearly defines the respective roles of their Regional fora, i.e. to provide NARS with a stronger voice in CGIAR and global fora and address key issues for improved coordination. One of the new important roles of the fora is to choose spokespersons to represent their region's scientific and technical views in the CGIAR and global agricultural research meetings. The current Regional Representatives, elected at FAO's Regional Ministerial Meetings, will maintain an operating role at the strategic and political levels. Effective coordination between these two representation mechanisms will be achieved by establishing clear roles for the former and redefining the roles of the latter making these mechanisms more complementary. Provision of funding is necessary to effectively serve their purpose.

For the regional and/or subregional fora to be effective, they must have a full-time Executive Secretariat with office and administrative support. This position is critical for effective operation of the fora and full ownership by their members. The Regional Executive Secretariats will perform the following functions:

- advise member countries on widening the NARS' membership to include all NARIs, universities, NGOs, farmer organizations, and the private sector;
- implement activities to strengthen sub-regional fora;
- foster the development of research and extension activities in the region;
- encourage the establishment of collaborative research, extension and training programs in accordance with national, subregional, and regional priorities;

- advise member institutions on issues pertinent to research, extension, and training management and organization;
- implement activities to strengthen linkages between national, sub-regional, and regional institutions with the international research community;
- represent their region at CGIAR and other global agricultural research and extension meetings.

Political legitimacy of Regional and Subregional Fora needs to be established so that firm agreements among partners are made to ensure free access to monitor and obtain products (including germplasm), resulting from regional or subregional research and to freely share responsibilities in the implementation of programs.

The responsibility for activities that cannot be addressed through the CGIAR system, but remain as high priority in the regional or subregional agendas must be undertaken by strong NARS in each region. Nevertheless, a funding mechanism has to be developed to ensure that those NARS' institutions selected by their fora evolve into regional centers of excellence and that the demand for quality and quantity of services required is adequately met.

3.4 Developing Partnerships Between NARS and Other Participants in the Global Agricultural Research Community to Increase Efficiency and Effectiveness in the Implementation of the GPA

The fourth major goal of the GPA is to build effective partnerships between the NARS and their fora on the one hand, and the CGIAR system, the ARIs, NGOs, and the private sector, on the other. As the NGOs and private sector become active members of the NARS, as will farmers organizations, their representation will be primarily through the corresponding regional fora. These partnerships are considered essential to meet the present challenges in a coherent and cost effective manner.

A primary concern is the need for collaborative mechanisms between NARS/IARCs/ARIs in the conduct of priority eco-regional and system-wide research initiatives. The use of innovative approaches, such as that of developing research consortia or introducing competitive bidding for ARI participation in such programs will be more widely used.

For cash or food crop commodities that lie outside the mandate of the CGIAR system, improved partnerships between NARS, their fora and ARIs will also be instituted. These will build on partnerships in the existing networks such as BUROTROP for oil palm and coconut, but may also require identifying new partners.

More knowledge of effective working partnerships is needed to gain insight for improving or developing new associations. To accomplish this, it has been agreed to carry out case studies of best practice under the GPA. The analyses of these case studies will be the subject of review by the end users, NARS, IARCs, and ARIs, in

workshops or seminars, and their results will be synthesized and made available to all interested parties.

Since the process is introducing or evolving existing mechanisms of partnership, it will require careful and regular monitoring. Assessing impact is important, both to ensure that the alternative technology has been adopted, adapted where it needs adaptation, and extrapolated to similar agro-ecological zones or socio-economic recommendation domains when possible. Results from impact assessment will be publicized and used for advocacy with policy makers and donors.

3.5 Securing Financial Support to Sustain the GPA and its New Partnerships

In launching the new global agenda, the perennial shortage of adequate funding has to be addressed in a comprehensive and innovative manner that will allow research and extension systems to sustainably operate. The fora will sensitize both policy makers and donors to the need for additional allocation of funds for research and extension activities. To do so, policy makers will have to be made aware of expected impact of new technologies. Capacity building of NARS in methodologies for impact assessment of the agricultural research and extension programs and instituting monitoring and evaluation methods to this end are important elements of the DAPs. The participation of representatives of the farmers organizations, and NGOs in the national, sub-regional and regional fora will help increase their awareness of the crucial role of agricultural research in development and enlist their support to lobby with the political and policy making bodies about the need for higher allocation of public funds for public good agricultural research.

Funding support is required for both the process and the program elements of the action plans. There are front-end transaction costs associated with strengthening of various interface mechanisms (the organizing of consultations at various levels, the networking arrangements, and introduction of new partnerships). At the global level, facilitation of the partnership- building through a steering group mechanism of the representatives of regional fora and facilitating agencies, involve certain transaction costs. The program elements of the action plans involve inter-NARS collaborative research at cross-country level, or comparative case analyses, training and electronic communications, or other forms of institution building support. Innovative practices will be implemented for mobilizing additional financial resources, such as the regional agricultural research funds now being set up in LAC and SACCAR which will not only give regions more flexibility in implementing their research priorities, but also in some cases, release matching funds from donors. Likewise, the Sustainable Funding Initiative (SFI), under development for use in Sub-Saharan Africa, also reviews many innovative mechanisms to secure sustainable funding. The lending operations of the multilateral institutions for the agricultural sector can also provide financial components for capacity-building support to NARS and possibly to assist the borrowing country's financing of cross-country networks and collaborative research programs. These mechanisms can assist in raising contributions towards the establishment of endowment funds, which would generate sufficient income towards meeting the costs of strengthening the global research system.

While mobilizing new funds is essential for the expanded GPA, the more effective utilization of existing funds through more cost effective collaborative or integrated research partnerships is a major goal of the GPA, and is also reviewed under the African SFI.

The regional fora, to be active and functional, need a small, but well-equipped secretariat, so that among other things, it can maintain data bases, promote interactions, prepare position papers on key issues, and monitor implementation of decisions and recommendations. For such secretariats to be sustainable, the NARS will endeavor to fund them wholly from within the region. Where this proves difficult, the NARS would welcome donor support to an established endowment fund to achieve this purpose.

Finally, the NARS wish to reiterate that they are fully committed to the new vision of a global research agenda, based on wider and more effective partnerships. Adequate funding for these new partnerships under the GPA is critical and NARS will advocate within their governments for an increase in allocation of resources for research to, at least, 1% of the agricultural GDP. There is also an expectation that donors will respond through new commitments and increased funding allocation to implement the elements of this GPA and help meet the goals that we all vow to pursue.

4. REGIONAL DETAILED ACTION PLANS

This NARS document for the GPA is accompanied by four DAPs (annexed separately), that have been prepared and approved by each region. These documents contain the background to agricultural and natural resource development in each of the four regions, the needs and opportunities for research, details for institutionalising the regional and sub-regional fora, their functions, goals, priorities, and specific actions for the short and medium term. They also provide plans for collaborative research partnerships amongst NARS, between NARS and the CGIAR system, and with other components of the global research system. These plans were discussed in the Preparatory Meeting for the Global Forum in Rome.

The following sections of this chapter do not constitute an executive summary of the DAPs, nor do they follow a uniform format or coverage, however, they present the main goals, issues, and actions which have been captured in the preceding sections of the GPA. If necessary the DAPs may be consulted for more specific information, actions plans, and operational details.

The regional perspectives as provided by their representatives in the Preparatory Meeting are in the nature of an overview which highlights some of the key strategic issues and directions for planned actions. There is one area relating to the role of the regional fora which needs special mention. In the case of the Sub-Saharan Africa and the Latin America and the Caribbean, it is the Sub-regional DAPs which would constitute the operational basis for implementation. However, in all regions, the DAPs will serve as an overall coordinating and monitoring framework, besides promoting region-wide and cross-regional collaboration.

It was agreed during the Rome meeting, that a Steering Committee of the Fora Chair Persons, to be chaired by one of its members on a rotating basis, would constitute a standing mechanism, to be facilitated by IFAD in cooperation with the other agencies. The NARS' Global Steering Committee would ordinarily meet on the occasion of the MTM and the ICW meetings and play the crucial co-ordinating role for the strengthening of the NARS, and their fora so that they become active participants in the global agricultural research system.

4.1 Latin America and the Caribbean

4.1.1 Introduction

From 1950 to 1980 Latin American and the Caribbean as a whole evolved from a traditionally rural society to an urban one, the rural population decreasing from 59% to 35%. Nevertheless, the agricultural sector still plays a very important role in generating income and employment, specially if we consider the agroindustrial sub-sector that is related not only to farm production, but to integrated production chains that include the production of agricultural inputs, as well as the post-harvest processing of agricultural products. In this integrated perspective, a large proportion of the region's economy is based on agriculturally-related products. Furthermore, regional averages conceal huge differences between, and even within countries, as many places are still predominantly rural in the region.

Between 1950 and 1970 a very important process of expansion of the agricultural frontier took place. The cultivated area increased from 50 million hectares to close to 100 million hectares. During this period approximately 66% of the increase in production, a factor that has played a very important role in the region's economic growth, came from this expansion of the agricultural frontier. However, this is no longer possible or desirable, given the fact that much of the remaining land is marginal for agricultural production or in fragile ecosystems. Thus, the strategies to increase production must be based on technological innovation and increased yields, with a higher use of inputs and capital goods, nevertheless, within the framework of sustainable development.

Within this context, the Latin American and Caribbean region is facing an increasing problem of rural poverty and of food security. Between 1980 and 1992 the number of rural poor grew dramatically from 195 million to more than 250 million. In the Andean countries, 86% of the rural population is under the poverty line, with individual countries in the sub-region reaching higher proportions. This, in turn, generates three dangerous trends for the sustainable development of the region. In the first place, rural poverty is one of the main causes of urban poverty and of social unrest through the migration of peasants to larger urban centers. Secondly, rural poverty leads to exploitation of marginal agricultural land and exerts pressure on fragile ecosystems, generating a vicious circle between poverty and degradation of natural resources, mainly soil erosion. Thirdly, this socio-economic environment fuels the production of drugs as a survival strategy. Since agricultural production has not grown fast enough to keep pace with the increases in internal and external demands, more countries in the region are relying on food imports to satisfy basic needs in which previously they had been self-sufficient. Prevailing low income levels aggravate the problem of access to food thus, increasing the region's food insecurity.

In the external sector the picture is equally worrisome. The region's share of the world-wide food market fell from 20% in the sixties to 10.7% in the nineties, which leads to a serious question of competitiveness of the agricultural sector in the globalized world of today. This lack of competitiveness is visible even in the internal markets, where food imports have in many cases replaced traditional food crops, with a concomitant loss of biodiversity and of the native agricultural species that were more resistant to pests and to local stress conditions.

4.1.2 Rationale

In order to respond to this situation, the region's development strategy at the turn of the century requires four basic components. First, it is necessary to promote a restructuring of the agricultural sector, in order to re-establish its competitiveness in the present context of globalized economies. Second, it is of paramount importance to explore opportunities of agroindustrial expansion, based on an integrated view of production processes that includes industrial inputs as well as industrial processing of agricultural products. Inter-sectoral linkages can become an important engine of growth and of employment generation. Third, greater emphasis on equity is required, in order to increase the income level of the larger sector of the population and increase internal demand. Fourth, the sustainable management of the region's rich biodiversity has to be assured.

This context and the development challenges it generates leads to the need for an increased investment in agricultural research for the development of appropriate technologies. Given the high costs of research and the limited resources available, international collaborative research efforts in agriculture are increasingly necessary in the present context. This also reflects the fact that the generation of knowledge and technology in the contemporary world is increasingly a result of trans-national research and innovation networks, and not of single country efforts. These networks are based on strategic alliances that are being established among the various participants involved in this process.

4.1.3 Medium Term Plan

It is within this context that the present Action Plan for Regional and Global Collaborative Agricultural Research has been developed, and structured around two major dimensions. The first is the implementation of support activities aimed at increasing the effectiveness and the impact of agricultural research efforts. The second one, is carrying out joint or collaborative research and technological development projects and programs.

Four activities are envisaged in the first dimension. The first one is aimed at capacity building and strengthening of the National Agricultural Research Systems (NARS) of the countries in the region. This will involve of human resources and institutional development efforts aimed at increasing their research capacity as well as improving technology transfer and innovation processes. The second one is aimed at increasing subregional and regional collaboration, through the establishment and strengthening of two important instruments: A Regional Forum that facilitates and promotes collaboration and exchange of information and of technology among the countries of the region, bringing together not only the public research institutes but also the private sector, universities and NGOs that increasingly play an important role in research and technology dissemination. A second instrument at the regional level is

constituted by the Regional Fund for Agricultural Technology recently established at the IDB Annual Assembly, with the objective of providing financial support to collaborative research and technology development efforts in this sector. A third activity is aimed at strengthening collaboration at the global level through the increased involvement of the region in the international research system co-ordinated by the CGIAR. This brings into the picture the research capacity of the IARC, as well as that of ARIs, and universities in various countries. In today's world knowledge and technology is increasingly a product of globalized networks that bring together and complement the capacities that exist in many institutional and geographic locations, through a variety of new strategic alliances and partnerships. A fourth activity is aimed at improving the capacity for strategic thinking at the various levels, seeking to improve the capacity for priority setting, for the identification of opportunities and of challenges the rapidly changing world generates, and for the development of appropriate responses to them. This has to be done in a concerted fashion at the national, regional and global levels, in order to coordinate efforts and facilitate the development of the relevant partnerships that are required. In order to provide a framework for these various efforts, the Latin American and Caribbean region is presently formulating a First Mid-Term Plan for Collaborative Agricultural Research in order to provide relevant strategic orientations .

The second dimension of the Action Plan that is being proposed is constituted by the actual joint or collaborative research projects and/or programs themselves, that will be carried out through various partnerships involving NARS, IARCs, regional and advanced research institutes, universities, NGOs and the private sector, since these institutions play key roles in the dynamic processes being generated between research, technology development, production, and sustainable and equitable development, aimed at improving the well being of people.

4.2 Asia and the Pacific

4.2. 1 Introduction

The Asia-Pacific Region accounts for 56% of the world's population, more than 70% of the world's farming households, but only 30% of the world's arable land. More than 40% of the region's population is below the poverty line, while approximately 75% (300 million people) of the world's malnourished people live in this region. Likewise, the majority of the farmers are small farmers and their access to production inputs is poor. In general, agricultural production is low and is highly unstable while there is a higher demand for food and other agricultural products caused by an increasing population. Against this backdrop, the NARS in the region initiated the establishment of the Asia-Pacific Association of Agricultural Institutions (APAARI).

Since the establishment of APAARI in 1990, it has become the most important regional forum in the region for renewing, enhancing and establishing collaboration and partnerships among the NARS and between the NARS and the CGIAR centers (IARCs), as well as ARIs and other regional and international organizations that

promote agricultural research. As of 1996, nineteen NARS have joined APAARI while seven have become associate members.

The APAARI's action program embodies the vision of a region empowered, its resources stretched and sustained to optimal capacity and its products and services of world class standard. It seeks to take part in nursing the Asia Pacific Region to a sustained growth. The program addresses the pressing issues of food security, poverty alleviation, sustainable natural resource management, and global competitiveness.

APAARI considers the important features of the Asia Pacific Region (the most economically dynamic region of the world) moving towards the 21st century through the translation and implementation of its perspective plan. The APAARI medium term program (1998-2000) shall enhance APAARI as the Regional Forum for consultation, cooperation, broadening partnership, capacity building, consultation and priority setting, networking, information exchange, training, resource generation and regional representation.

4.2.2 Medium Term Plan

The components of the medium term plan include:

1. Strengthening NARS and the APAARI

- **Broadening Partnership:** In order to enhance partnership, the NARS shall be continuously broadened not only to include NARIs but also universities, farmers associations, NGOs, and the private sector. APAARI, as the regional forum, shall also continue to broaden and adopt a more holistic approach to agricultural research encompassing all cash crops, food crops, livestock, forestry, and fisheries.
- **Priority Setting:** Individually and collectively, NARS in the region shall enhance their capabilities in systematically setting research priorities. Stronger NARS have now the capacity but weaker NARS shall be assisted. APAARI will work with the NARS in improving their capabilities on research evaluation and agenda setting. APAARI shall formulate the regional research and development priorities/agenda and shall interact actively with CGIAR-TAC-IARCs in pursuit of joint priorities/programs in the region. Other research management concerns shall be looked into and enhanced at national and regional levels.

2. Support to APAARI

- **Secretariat:** It is envisioned that a secretariat with enough logistical support be set-up with a full-time Executive Secretary and an Administrative Assistant. At this point, these have been served through part-time arrangements. The Secretariat may be hosted by either FAO-RAPA or a NARS in the region. With a functioning secretariat, together with the officers of APAARI, regional representation and other important functions can be realized.

Publications and MIS: APAARI shall continue to pursue an aggressive publications program. Likewise, a Management Information System (MIS) shall be set-up for enhanced scientific and technological exchange and other related purposes .

- Information Technology and Communication Links: APAARI and its member countries shall pursue the use of new communication technologies/tools that could effectively link with CGIAR and its IARCs. Partnership of all concerned shall be enhanced with new means of communication and the setting-up of a systemwide network.

- Human Resources Development: Training programs and other forms of human capital build-up shall be pursued. Cross visits, fellowships, and retooling programs, particularly for leading edge science shall be established.

3. Setting up of a Regional Technology Fund

- APAARI shall pursue, in partnership with its member countries, the setting up of a Regional Technology Fund to support regional/sub-regional research and development projects, including support activities. This fund is an endowment fund and only its interest earnings shall be appropriated accordingly. Proceeds can also be used as a matching fund mechanism.

4. Collaborative Research Programs/Networks

- Strengthening Existing Programs/Networks: APAARI shall endeavor to strengthen existing regional/sub-regional collaborative programs particularly NARS-driven projects. Likewise, effective partnership modalities shall be enhanced. Case analyses of successful research collaboration shall also be done

- Proposed Programs/Networks: APAARI with the NARS and with its partnership with the CGIAR system, shall identify and pursue priority collaborative research and development programs/networks. APAARI is at the moment in the process of systematically formulating its regional research and development priorities/agenda which will be ready by November, 1996. These priorities shall be the basis to pursue discussions with TAC and the IARCs on new programs for 1998–2000.

4.3 Sub-Saharan Africa

4.3.1 Introduction

In December 1994, consultations were initiated by the CGIAR and the NARS in order to reorient their relationship towards mutually beneficial collaboration. Realizing that this was not novel, the focus was placed on streamlining and strengthening the partnership. Subsequent to the principle agreements, a process of dialogue was initiated. It was evident that the ago-ecological and geopolitical setting of various regions would have a bearing in the negotiation process. For this reason, the regional conglomerates were seen as better units of operation. The Sub-Saharan region began earnest consultations in late 1995 and has continued to refine the cooperation perspectives. For SSA, advantage was taken of the fact that there already existed four reasonably organized subregional frameworks i.e. SACCAR, ASARECA, CORAF and INSAH. It is these units that have formed the working organ for SSA. In the process, the region has seen the need for the formation of an operational Apex body currently referred to as Forum for Agricultural Research in Africa (FARA). This is seen as the body that will

collaborate with CGIAR and other partners in matters relating to Agricultural Research and developments thereof; as well as ensuring that the region has co-ordinated mechanisms of consultation.

4.3.2 Operational Plan

Realizing that SSA is bedeviled by underdeveloped agriculture which could become potentially contributive if well managed, FARA has therefore made tentative plans of action which would culminate in SSA being able to take advantage of global partnerships. Hopefully, these expanded partnerships will jump-start the virtually stagnant agriculture and thereby cause agri-development revolution in the region. For this to happen, FARA sees it as paramount to ensure that proper consultations on specific matters vital to the enhancement of the process are given attention. These matters include:

- Formalization of the apex implementing body (FARA) in order to achieve a more structured management process.
- Starting and encouraging a bottom-up priority setting process within the entities of FARA.
- Ensuring that FARA organs are intrinsic in the global agenda of research and agri-development especially as it relates to Africa.
- Ensuring that FARA organs are enabled to communicate meaningfully in order to take advantage of comparative strengths and to reduce inefficient duplication either amongst their own institutions or those of other partners including the CGIAR, NGOs, ARIs, and private sector.
- FARA is cognizant of the value of a conducive policy climate. It is the hope and intention of FARA to ensure that the operational units will become more involved in policy dialogue and formulation. This will become possible as FARA works towards increased capacity in sciences pertinent to the process of policy improvements .
- In terms of capacity building, FARA aims at achieving recognition by its own governments and other partners in order that the necessary investments can be made to improve agriculture. FARA hopes that by its ability to articulate the structural adjustments necessary for development, its constituency will receive wider recognition and resources found to cause the much needed agricultural development.

4.3.3 Conclusions

FARA is clear on the value of global collaboration and it is committed to encourage its NARS and subregional organizations to do all possible to achieve meaningful partnership. FARA, however, believes that the required investments will come from both local and global pockets. It is FARA's contention that good intentions alone are not enough and that the current process would come to naught if the resources required to implement the required activities are not found. FARA will continue to improve its own organs and hopes that the joint efforts with other partners will transform in the lifestyle of its peoples whose quality has great potential for improvement.

4.4 West Asia and North Africa

The WANA region includes an area of about 17 million square kilometers and has a population of about 510 million (1990), and is characterized by a fragile natural resource base. This region is the largest food importing Region in the developing world, due mainly to a rapid growing population, increasing urbanization and a low rate of growth in the production of major food commodities, which was only 2.2% in the 1980s as against a 3.1% rate of population growth.

The Association of Agricultural Research Institutions in the Near East and North Africa, AARINENA, realizing the problems and challenges facing the member countries in areas of food security, alleviation of poverty, and improvement of farmer incomes in a sustainable manner, has decided to strengthen subregional, regional, and global collaboration with the CGIAR.

The Fifth General Conference of AARINENA held in Rabat, Morocco, in April 1996 has adopted the following resolutions:

1. Broadening the Partnership

In order to enhance collaborative research among NARS based on agro-ecological, socio-economic and cultural considerations, the following sub-groupings were created:

- North Africa: Algeria, Libya, Morocco, Mauritania, Malta, and Tunisia
- Nile Valley and Red Sea: Egypt, Sudan, Djibouti, and Somalia
- Fertile Crescent: Cyprus, Iraq, Jordan, Lebanon, Palestine, and Syria
- Arabian Peninsula: Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, U.A.E., and Yemen
- West Asia: Afghanistan, Iran, Pakistan, and Turkey

Membership is changed from NARI to NARS to include all components of agricultural research, i.e. NARI, universities, NGOs, private sector. Each is represented by one member in the Association.

It is recommended that the newly independent Central Asian Republics may join the Association and be included in the West Asian subregion.

2. Priority Setting and Country Profiles

Each member country was requested to prepare their research priorities which were then forwarded to ISNAR for synthesis and co-ordination at subregional and regional level. The countries were also asked to prepare comprehensive country profiles with emphasis on agricultural status and indicators according to a standard format. The profiles will then be compiled in a computerized data base by AARINENA who make them available to all countries.

AARINENA will also formulate the regional and subregional research agenda and interact effectively with CGIAR, TAC, and IARCs to accomplish joint priorities/projects in the region.

3. Capacity Building

- Secretariat: AARINENA will develop its own capacity for self-reliance to fulfill its mandate and objectives by appointing a full-time Executive Secretary in 1998.
- Human Resource Developments: human resource development and improvement of research management skill for planning, monitoring and evaluation of research programs will be pursued. Organizing training courses, seminars, workshops and exchange of visits among scientists will be arranged in partnership with the CGIARs and its IARCs.
- Information Management Systems: Development of research information systems and interconnecting them with NARS and the CGIAR has high priority on the AARINENA agenda.
- Institutional Restructuring: To develop AARINENA into an effective regional forum, restructuring it into the recommended five subregional groupings is imperative. Therefore amendments in the constitution and the operational mechanism to facilitate regional and global partnership are necessary and will soon be addressed by the Association.
- Publication: AARINENA will continue to follow a highly visible and effective publication program on research and current regional and global scientific progresses .

4. Medium-Term Programs for 1998-2000

- Identification of research priorities, taking into account the present and expected changes in the political and economic environment in the sub-regions as well as global changes.
- Identification of collaborative research programs on issues of priority for the member countries, i.e. introduction of resource management dimension in research programs (especially water resources, land degradation, salt tolerant plant, IPM and biological control, etc.) and establishing permanent structures for the identification, implementation, monitoring and evaluation of such programs.
- Co-ordination of research programs among the member countries and the establishment of a mechanism to exchange information on technology development.
- Establishment of a management information system at the regional and sub-regional levels.
- Identification of priorities for human resource development, specially for research management. Organizing training activities according to national, subregional, and regional priorities in collaboration with the CGIAR system.

5. NARS CONTRIBUTION TO THE DECLARATION OF GLOBAL PARTNERSHIP IN AGRICULTURAL RESEARCH FOR ENSURING FOOD SECURITY, POVERTY ALLEVIATION, AND SUSTAINABLE NATURAL RESOURCE MANAGEMENT

We, the members of the National Agricultural Research Systems (NARS) from the regions of Asia-Pacific (AP), Latin America and the Caribbean (LAC), Sub-Saharan Africa (SSA), and West Asia and North Africa (WANA)

- *Cognizant* of the formidable challenges faced by the world especially the developing countries to realize broad-based agricultural growth in order to alleviate poverty, ensure food security, and protect the environment;
 - challenge posed by the need to adequately feed an expanding population, and provide it with sustained means of livelihood (or source of income);
 - challenge to increase agricultural production through environment friendly and yield-enhancing technologies;
 - challenge to realize these while maintaining the integrity of the natural resource base;
- *Prompted* by the urgency of addressing these challenges through mechanisms that require concerted and collaborative action by the global community;
- *Convinced that* scientific and technological responses through agricultural research are the most effective means of surmounting the challenges, as evidenced by its enormous past contributions particularly to the goal of increasing food production in the developing world;
- *Realizing* the urgency to achieve technological breakthroughs in agricultural research based on current and potential advances in basic sciences to meet the challenges and opportunities of a changing global context, i.e. increasing globalization, more liberalized agricultural trade, and a changing private sector; and
- *Recognizing* that opportunities exist for agricultural research to develop new approaches and partnerships to place the potential of science and technology at the service of the world community to help achieve sustainable food security at the global, regional, national and household levels;

do hereby reaffirm our commitment to develop a productive, diversified, sustainable and equitable agriculture for our respective countries. We aim to develop our respective NARS into strong participatory technology generation and dissemination systems with the involvement of the end-users - the farmers, consumers, and other stakeholders - of agricultural research. We fully recognize the immense value of partnerships among ourselves and with other institutions and organizations at regional and global levels to enable us to effectively and efficiently confront the foregoing global challenges. In the pursuit of these objectives, we commit to undertake the following course of action:

- *Broaden* the NARS concept to include not only the National Agricultural Research Institutes (NARIs), but also the universities, private research organizations, research-oriented NGOs and farmers organizations,
- *Engage* actively in subregional and regional fora which serve as mechanisms of inter-NARS linkages and cooperation,
- *Strengthen* existing and *develop* new partnership arrangements on the basis of common interest and comparative advantages,
- *Utilize* the mechanisms of the subregional and regional fora and the partnership with the CGIAR centers and other institutions to influence research priority setting and enhance communication processes and information system,
- *Advocate* within our respective governments increased investments in agricultural research, i.e. aim for the allocation of at least 1% of the agricultural GDP,
- *Promote* the establishment of innovative and sustainable funding mechanisms aimed at mobilizing the required resources to facilitate collaborative research efforts

Guided by the foregoing principles and plan of action, we hereby bind ourselves together as the NARS Global Steering Committee, to express our collective intent to enter into covenant with IARCs of CGIAR and other international centers, advanced research institutions, regional research organizations, private sector and NGOs to formalize a unified global agricultural research system. This calls for the mobilization of the world's scientific community working on agricultural and natural resource management issues and problems and move to develop a global agricultural research agenda responsive to the challenges and opportunities.

6 LIST OF ACRONYMS

AARINENA	Association of Agricultural Research Institutes in the Near East and North Africa
APAARI	Asia-Pacific Association of Agricultural Research Institutes
ARI	Advanced Research Institute
ASARECA	Association for Strengthening Agricultural Research in Eastern and Central Africa
CARDI	Caribbean Agricultural Research and Development Institute
CGIAR	Consultative Group for International Agricultural Research
CONDESAN	Andean Ecoregional Consortium for Sustainable Development
CORAF	Conference of Leaders of African Agronomic Research (West-Central Africa)
DAP	Detailed Action Plan
FAO	Food and Agriculture Organization of the United Nations
FARA	Forum for Agricultural Research in Africa
IARC	International Agricultural Research Centre
ICW	International Centers Week of the CGIAR held at end of October each year
IFAD	International Fund for Agricultural Development
IICA	Inter-American Institute for Cooperation in Agriculture
INSAH	Institut du Sahel (Institute of the Sahel)
ISNAR	International Service for National Agricultural Research
IVDN	Integrated Voice and Data Network
LAC	Latin America and the Caribbean Region

MTM	Mid-Term Meeting of CGIAR, held in May each year
NARS	National Agricultural Research Systems
NGO	Non-Governmental Organization
PROCI	Cooperative Programmes for Agricultural Research and Technology Transfer
PROCIANDINO	Andean PROCI
PROCICARIBE	Caribbean PROCI
PROCISUR	Southern PROCI
PROCITROPICO	Tropical PROCI
RAPA	FAO Regional Office for Asia and the Pacific
SAA	Sub-Saharan Africa
SACCAR	Southern Africa Centre for Cooperation in Agricultural Research
SADC	Southern Africa Development Council Conference
SICTA	Sistema de Integraciòn Centroamericana de Tecnología Agropecuaria
SPAAR	Special Programme for African Agricultural Research
TAC	Technical Advisory Committee of the CGIAR
WANA	West Asia and North Africa Region
WORLD BANK	International Bank for Reconstruction and Development

Minutes of the NARS Preparatory Meeting for the Global Forum

Rome, IFAD, August 26-30, 1996

The Representatives of the Regional Fora that have been established by the National Agricultural Research Systems (NARS) from the regions of Asia-Pacific (AP), Latin America and the Caribbean (LAC), Sub-Saharan Africa (SSA), and West Asia and North Africa (WANA), met in Rome, at the IFAD Headquarters, from August 26 to 30 for the above-mentioned preparatory meeting. The meeting also had participants from all of the facilitating agencies for the NARS-CGIAR Partnership Initiative - IFAD, FAO, the CGIAR Secretariat, ISNAR, TAC, World Bank/ESDAR, SDC/Switzerland, and the European Commission.

The purpose of the preparatory meeting was (i) to draft, from the perspective of the NARS, the **Plan of Action for the Strengthening of Global Agricultural Research**, which will be presented at the *Global Forum* that will take place in Washington, D.C., on October 30-31, during the occasion of the CGIAR ICW-96 meeting; and (ii) to discuss the agenda and other related arrangements for the Forum. The Global Plan of Action (GPA) is based on Regional Plans of Action that were prepared by designated representatives of the NARS Regional Fora. The regional plans, in turn, represent outcomes of parallel intra-regional NARS consultations, in each region.

Dr. Abdelmajid Slama, Director of the Technical Advisory Division of IFAD, welcomed the participants and highlighted the importance of the objectives of the meeting. After a discussion of the expected output of the meeting, and the documentation and the Agenda for the Global Forum, a brief presentation was made of each of the four *Regional Action Plans* and of the follow-up to the Regional Consultation Meetings that were held in early 1996 in the four regions mentioned above.

The rest of the meeting concentrated on the preparation of documentation for the Global Forum meeting. Two major documents emerged from the meeting. In the first place, the Global Plan of Action was prepared (a copy of which is attached). The Plan is organised in three main sections :

- Background and Process
- Goals and Actions
- Summary of Regional Detailed Action Plans (DAPs).

A second major document prepared by the participants to the meeting was the **NARS Contribution to the Declaration of Global Partnership in Agricultural Research for Ensuring Food Security, Poverty Alleviation, and Sustainable Natural Resource Management**.

In this Declaration the NARS highlight the importance of strengthening *Global Agriculture Research* and of the partnerships that are required to bring this about. In this endeavour, the commitment of both developed and developing countries is required in order to respond to the formidable challenges generated by alleviating poverty, attaining food security and assuring sustainable development. Only through the mobilisation of the world's scientific community working on agricultural and natural resource management issues, and through a global agricultural research agenda that can provide the framework for such an effort, will we be able to mobilise the necessary resources to tackle these issues. This involves the active participation of the private sector and of NGOs, besides that of the IARCs of the CGIAR, NARS, advanced research institutions, regional research organizations and other relevant institutions in the R&D community.

With the purpose of facilitating co-ordination and exchange of information, the Regional Representatives of NARS decided to establish a *NARS Global Steering Committee*, made up by the Chair Persons of the Regional Fora (AP, LAC, SSA and WANA). It was decided that this Committee will be chaired by one of its members on a rotational basis. The following plan was approved for rotating the chairmanship of the Steering Committee:

- ICW 96, MTM 97 and ICW 97: Chairman: LAC, Vice-Chairman: AARINENA (WANA)
- ICW 97, MTM 98 and ICW 98: Chairman: AARINENA, Vice-Chairman: APAARI (AP)
- ICW 98, MTM 99 and ICW 99: Chairman: APAARI, Vice-Chairman: FARA (SSA)
- ICW 99, MTM 2000 and ICW 2000: Chairman: FARA, Vice-Chairman: LAC.

It was recommended that the NARS Global Steering Committee meet at all ICW and MTM meetings, as a group. This would facilitate co-ordination, exchange of information and discussion of joint initiatives among the different Regional Fora.

The Regional Representatives emphasized the important role IFAD and ISNAR have played in facilitating and orienting the new CGIAR policy of regionalization, as well as the process of Regional Consultations that have taken place. It is thanks to their support, as well as that of other facilitating agencies, that we now have the proposed *Global Plan of Action*, finalized this week in Rome.

The Regional Representatives agreed to send their 10 nominations of participants to the Global Forum by 20 September at the latest. It was agreed that the two NARS representatives on the drafting committee for the Global Forum would be Fernando Chaparro and William Dar.

The Regional Representatives also expressed their sincere appreciation for the task accomplished by the group of consultants with whom they worked throughout the week (S.N. Saigal, John Russell, Berndt Muller-Haye and Roberto Arias). This group played a key role in facilitating the preparation of the final text of the *Global Plan of Action*, including the Declaration.

Finally, all participants expressed their appreciation to Abdelmajid Slama, to Shantanu Mathur and to all the IFAD staff for the excellent support and organization of this meeting.