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International Service for National Agricultural Research

isnar

1984 Annual Report

The International Service for National Agricultural Research (ISNAR) began operating at its headquarters in The Hague, Netherlands on September 1, 1980. It was established by the Consultative Group on International Agricultural Research (CGIAR), on the basis of recommendations from an international task force, for the purpose of assisting governments of developing countries to strengthen their agricultural research. It is a non-profit autonomous agency, international in character, and non-political in management, staffing and operations.

Of the thirteen centers in the CGIAR network, ISNAR is the only one which focuses primarily on national agricultural research issues. It provides advice to governments, upon request, on organization, planning, manpower development, staff requirements, financial and infrastructure requirements, and related matters, thus complementing the activities of other assistance agencies. Additionally, ISNAR has an active training and communications program which cooperates with national agricultural research programs in developing countries.

ISNAR also plays an active role in assisting these national programs to establish links with both the international agricultural research centers and donors.

ISNAR is supported by a number of the members of CGIAR, an informal group of approximately 30 donors; it includes countries, development banks, international organizations, and foundations.

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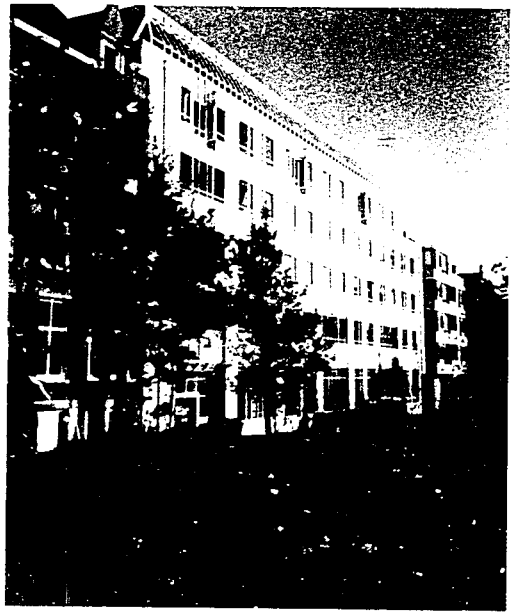

International Service for National Agricultural Research

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June 1985

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Foreword

The 1984 Annual Report for ISNAR is presented at a time when agricultural production in Africa has not kept up with population growth, and this fact, combined with drought, has caused extreme food shortages and starvation in many countries. And there do not appear to be any immediate solutions. The situation is in sharp contrast to over-production and surplus grain supplies in Europe and North America. In the short run there is a great dependency on food aid, but this is not a long-term solution. Africa can, and must, substantially increase its food production.

At the same time, there is a delicate balance between food supplies and population in many parts of the world, and with the rapidly increasing population, even one year of severe adverse weather conditions places people in those areas in a situation of serious food shortage.

Two important challenges continue to face us in the '80s and '90s: slowing the rapid population growth which is putting extreme pressure on land and other natural resources, and alleviating poverty by stimulating food production and better distribution of available food supplies in Africa, Asia, and Latin America.

Changes in food supplies ultimately result from a chain of complex inter-related factors of natural resources, technology, economic, social and political factors, and a commitment at all levels of society. Many countries have found the way to put these factors together and are making good progress. Others are still seeking the right combination and, unfortunately, in some of the countries, in spite of shortages, the political will and support to make the needed changes does not appear to be present in spite of much rhetoric about the importance of agriculture.

On the positive side, on a worldwide basis and among leaders of many of the developing countries and the donor community, there is a renewed and increased understanding of the great importance of agriculture as the base for development in most developing countries. Further, there appears to be a renewed awareness of, and support for, agricultural research as an essential element for sustained agricultural growth.

ISNAR, since its inception in 1980, has played an important role in several countries in helping to bring about this renewed awareness of the role and

importance of agricultural research in the development process. ISNAR is working as a partner with several developing countries to help them better organize, manage, and carry out research which will support agricultural development and improve the well-being of the rural people as well as produce the needed food supplies for their rapidly growing urban populations.

This 1984 Annual Report presents some of the work in which ISNAR is engaged as a partner in several regions of the world.

On behalf of the Board of Trustees and Staff of ISNAR, I am pleased to present this report, which reflects the confidence and support of many developing nations and donors in ISNAR.

William K. Gamble
Director General

Table of contents

2 Foreword
4 Board of Trustees
5 1984 Donors
6 1984 Staff
7 Team approach increases effectiveness of ISNAR's multidisciplinary staff
8 The challenge to strengthen national agricultural research systems continues
9 Some ways ISNAR works with national agricultural research systems
10 Some acronyms used in this report
11 The 13 International Agricultural Research Centers
12 ISNAR's continuing cooperation with national agricultural research systems
13 Examples of ISNAR's program work in different parts of the world
14 ISNAR's continuing relationship with Kenya
18 Working together in planning and conducting the Bangladesh workshop
21 Morocco review initiates ISNAR's involvement in West Asia and North Africa (WANA) region
24 PROAGRO -- examining the role of private research in Latin America
26 ISNAR continues its close cooperation with IFARD
27 Reports of ISNAR's continuing cooperation with other countries
28 Africa
40 Asia
51 Latin America
55 A look at other sections of ISNAR's team
[illegible] Emphasis on research management training was increased in 1984
60 ISNAR's approach to management training is illustrated by the Mananga workshop
63 ISNAR's research program to increase its knowledge base
67 Building a data base of comparable information
69 Publications make ISNAR's findings more available to others
71 ISNAR's library program complements other activities
73 Special projects contribute to ISNAR'S work and growth
75 1984 Staff participation, publications, and consultants
76 1984 Participation by staff
81 1984 Publications
82 1984 Consultants to ISNAR
85 ISNAR's 1984 financial report

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Donors to special projects

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Netherlands (Directorate General for International Cooperation)
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Rwanda (Government of Rwanda, Ministry of Agriculture and Livestock) -- with International Development Association loan funds
United Kingdom (Overseas Development Administration)
United Nations Development Programme
United States (Agency for International Development)

ISNAR Staff 1984

Administration

Dr. William K. Gamble, Director General
Dr. Robert B. Banks, Executive Officer
Ms. Alicia Mina, Administrative Officer

Review, planning and continuing cooperation with national agricultural research systems

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Dr. Rudolf B. Contant, Senior Research Officer
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Mr. René Devred, Senior Research Officer
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Dr. H.K. Jain*, Senior Research Fellow
Dr. Josette Murphy, Senior Research Officer
Dr. Guy Rocheteau, Senior Research Officer
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Dr. Willem A. Stoop*, Senior Research Officer
Dr. T. Ajibola Taylor, Senior Research Officer
Dr. Jean Noël Terrible*, Senior Research Officer (based in Rwanda)
Dr. Carlos Valverde, Senior Research Fellow
Dr. Floyd Williams, Senior Research Officer

Research on organization and management of agricultural research systems

Dr. Joseph Chang**, Research Fellow
Dr. Howard Elliott*, Senior Research Officer
Dr. Josette Murphy, Senior Research Officer
Mr. Peter Oram**, Senior Research Officer (on secondment from IFPRI)
Dr. Martin Piñeiro*, Coordinator of PROAGRO Project (two-thirds time, based in Argentina)
Dr. Eduardo J. Trigo, Senior Research Officer

Training and conferences

Dr. Paul Bennell, Research Fellow
Dr. Jean George Doumbe-Moulongo, Research Fellow
Mr. Huntington Hobbs IV, Senior Research Officer
Ms. Marie de Lattre, Research Fellow
Mr. John MacKenzie**, Research Fellow
Dr. Byron T. Mook, Senior Research Officer (Training)

Publications and information

Mr. Alan M. Fletcher*, Publications Officer
Dr. K. Robert Kern**, Communications Officer

* Joined during 1984
** Completed appointment during 1984

Team approach increases effectiveness of ISNAR's multidisciplinary staff

ISNAR's multidisciplinary staff represents a wide range of expertise, educational backgrounds, and professional experience.

The breadth of academic and professional capability of the staff enables ISNAR to respond positively to the many and varied requests for help it receives from national agricultural research systems with which it works. This breadth makes ISNAR's team approach, integrating and pooling staff knowledge and effort in working with national research systems, especially effective. The integration of staff effort increases ISNAR's effectiveness in two ways:

1. the experience and findings of the various staff sections contribute to the activity at hand;
2. the experience gained from the activity increases the body of knowledge from which all the staff can draw.

Many staff members are bilingual or multilingual. ISNAR publishes in English, French, and Spanish -- and recently has added Arabic capability to the range of its publishing and linguistic capability.

The challenge to strengthen national agricultural research systems continues

The need for ISNAR's work in strengthening national agricultural research systems (NARS) is as great today as it was when the national systems recognized that need and called for its creation as one outcome of a meeting at Bellagio, Italy in 1977. ISNAR was established in 1980 to help strengthen national agricultural research systems so they can better plan, organize, and carry out agricultural research to support a productive and efficient agriculture.

It does this by helping NARS identify and overcome problems, formulate research strategies and policies, develop research facilities, and manage their research programs more efficiently. ISNAR has two supporting objectives: to help improve cooperation between national agricultural research institutions and the international agricultural research centers; and to help national systems make better use of resources available from donors.

Staff members are grouped in four main sections

They are:

1. review, analysis, diagnosis, planning, and continuing cooperation with NARS in developing countries
2. training and conferences;
3. publications and information;
4. research studies of specific aspects of NARS and their performance.

These are organizational sections. In practice, ISNAR's staff works as an integrated group, with each section's activities complementing the activities of the others.

The work of the NARS section with national systems is the primary thrust of ISNAR's work. ISNAR's work with national systems is highlighted in this report, including examples of ISNAR's staff integration and interaction, how ISNAR functions in its supporting roles, and ways in which it builds continuing relationships with NARS.

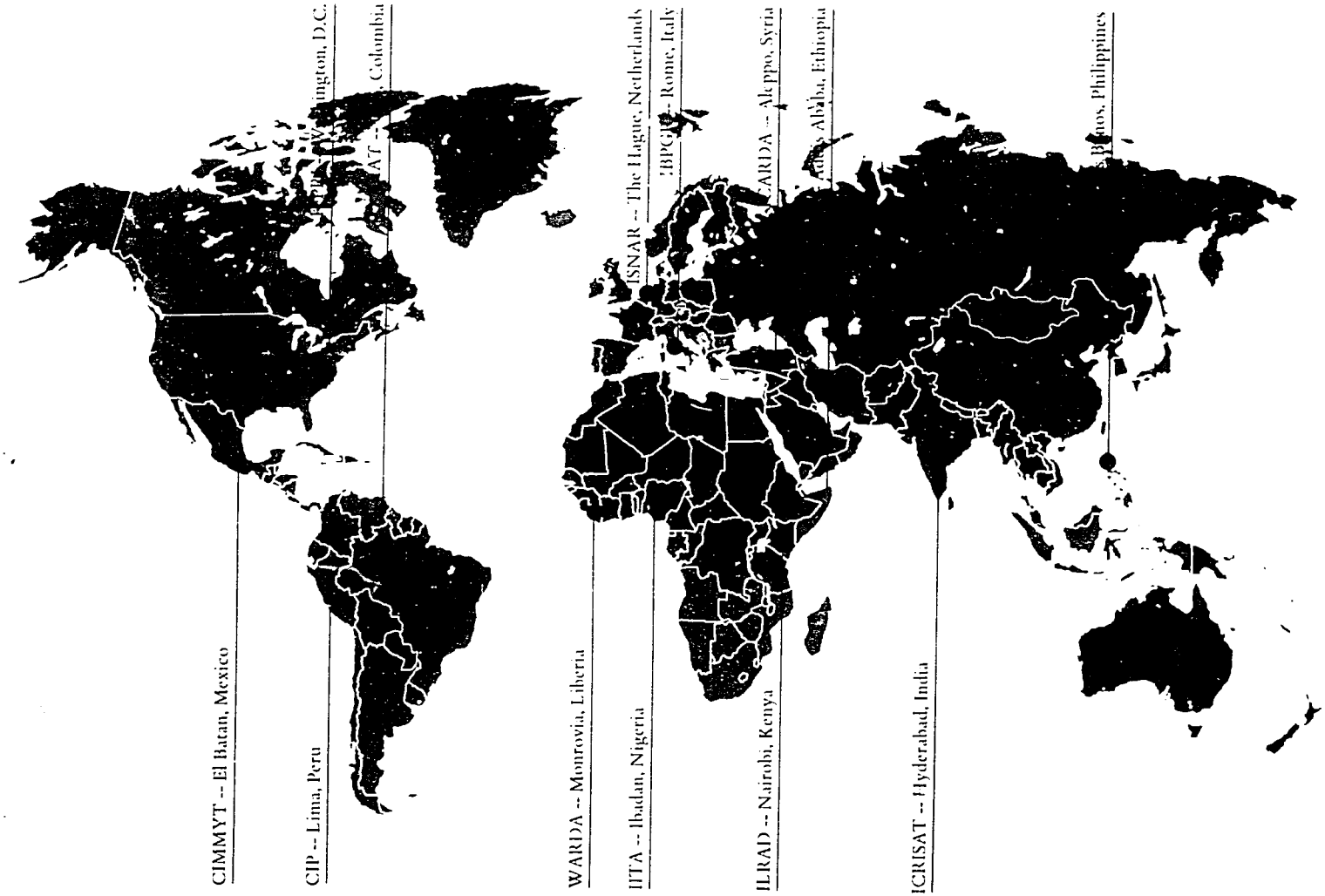
Some ways ISNAR works with national agricultural research systems

Objectives	Asia and the Pacific								Africa												Latin America and the Caribbean				
	Bangladesh	Fiji	Indonesia	Pakistan	Papua New Guinea	Sri Lanka	Thailand	Western Samoa	Burkina Faso	Cameroon	Ivory Coast	Kenya	Madagascar	Malawi	Morocco	Rwanda	Somalia	Sudan	Zaire	Zimbabwe	Argentina	Colombia	Costa Rica	Dominican Republic	Guyana
To help strengthen national agricultural research capacities in developing countries.	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●
To improve linkages between international agricultural research centers and national agricultural research institutions.		●	●		●				●		●	●	●	●		●	●		●	●				●	●
To help promote multilateral and bilateral cooperation in fields of agricultural research.	●	●	●		●	●		●	●	●	●	●	●		●	●	●		●					●	●
Activities																									
Identifying needs for planning and carrying out agricultural research.	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●		●			●	●	●	●
Determining research priorities, and formulating overall research policies and strategies based on those priorities.		●		●		●		●	●		●	●	●	●	●	●	●		●			●		●	
Elaborating programs of action, including contacting potential external sources for financing research programs and projects.	●		●		●	●	●		●		●	●	●		●	●	●	●					●	●	●
Determining the basic facilities required to conduct research.		●	●		●			●			●	●	●				●						●		
Providing specific professional services to national systems, including project identification and preparation, and outposted ISNAR staff.	●	●	●		●	●			●		●	●	●			●	●		●					●	●
Advising on human resource planning.	●				●		●		●	●	●	●					●	●		●	●				
Developing and improving communication of research results and training opportunities at international and regional institutions.		●											●			●	●								

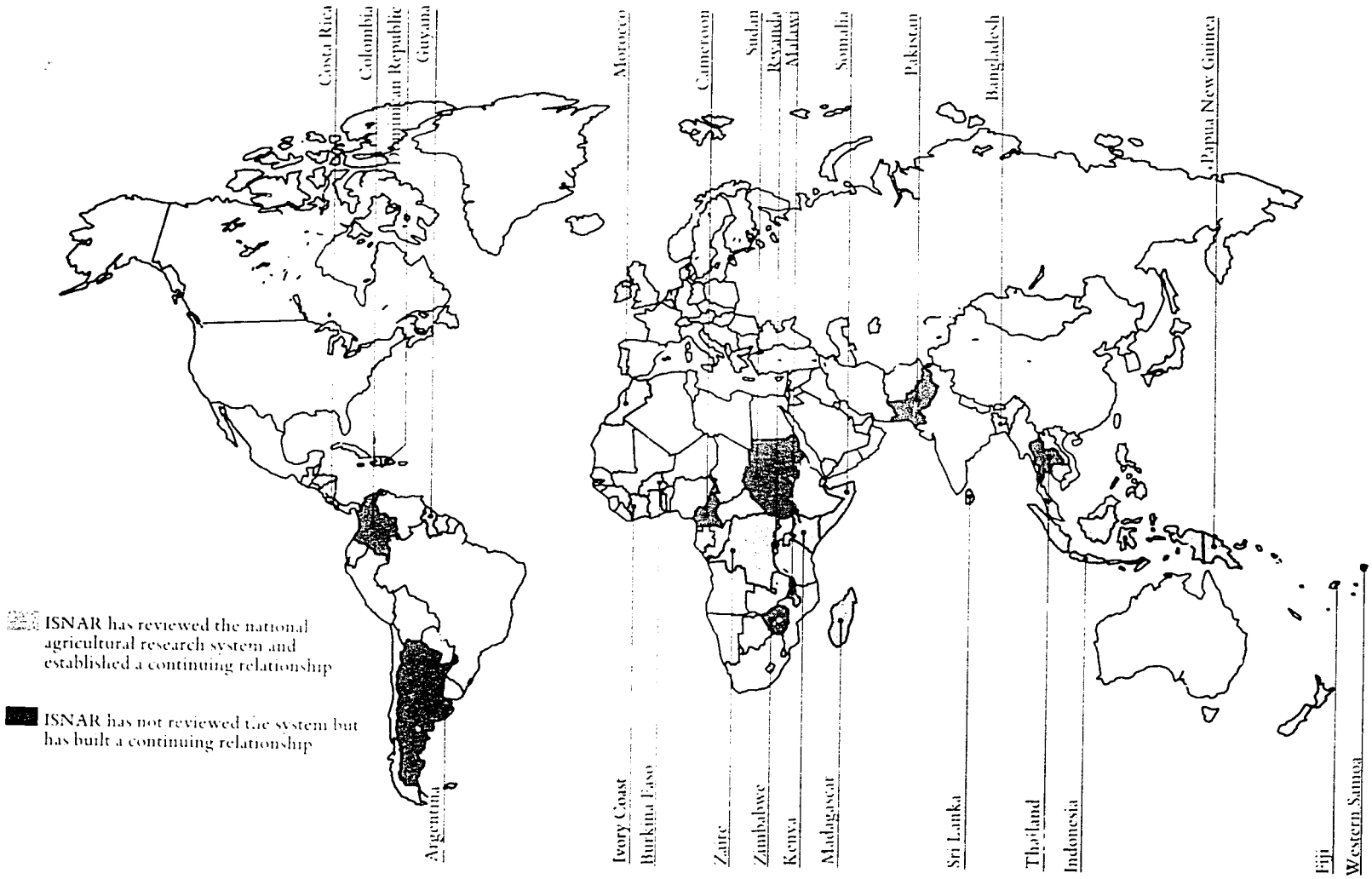
Some acronyms used in this report

AOAD	Arab Organization for Agricultural Development
AVRDC	Asian Vegetable Research and Development Center
CAB	Commonwealth Agricultural Bureaux
CDA	Cooperation for Development in Africa
CGIAR	Consultative Group on International Agricultural Research
CIAT	International Center for Tropical Agriculture
CIMMYT	International Maize and Wheat Improvement Center
CIP	International Potato Center
ESAMI	Eastern and Southern African Management Institute
FAO	Food and Agriculture Organization of the United Nations
IADS	International Agricultural Development Service
IARC	International Agricultural Research Center (a general term)
IBRD	International Bank for Reconstruction and Development (World Bank)
IBPGR	International Board for Plant Genetic Resources
ICLARM	International Center for Living Aquatic Resources Management
ICRISAT	International Crops Research Institute for the Semi-Arid Tropics
ICARDA	International Center for Agricultural Research in the Dry Areas
IDA	International Development Association
IDRC	International Development Research Centre (Canada)
IFARD	International Federation of Agricultural Research Systems for Development
IFPRI	International Food Policy Research Institute
IITA	International Institute of Tropical Agriculture
ILCA	International Livestock Centre for Africa
ILRAD	International Laboratory for Research on Animal Diseases
IRRI	International Rice Research Institute
JICA	Japanese International Cooperation Agency
NARS	National Agricultural Research System (a general term)
ODA	Overseas Development Administration
PROAGRO	Project on Agricultural Research Organization
SDC	Swiss Development Cooperation Agency
UNDP	United Nations Development Programme
USAID	United States Agency for International Development
WANA	West Asia and North Africa
WARDA	West Africa Rice Development Association

The 13 International Agricultural Research Centers (IARCs)



ISNAR's continuing cooperation with national agricultural research systems



Examples of ISNAR's program work in different parts of the world

ISNAR's continuing relationship with Kenya

ISNAR's cooperation with a system may begin with a limited program and later develop into an important partnership on a continuing basis

One of ISNAR's important characteristics is its ability to respond to the changing needs of national agricultural research systems with which it works. Its relationship with a system may begin with limited involvement and later develop into an important partnership on a continuing basis. ISNAR's experience with Kenya, where it conducted its first review and planning mission in Africa, is an example. It also illustrates the breadth of involvement within ISNAR, within the country, and with other groups in developing such a continuing relationship.

Three factors were important in ISNAR's growing involvement with Kenya: (1) Kenyans worked closely with the ISNAR team, and thus were associated with and had a sense of ownership of the results; (2) internal changes created a more receptive climate for change and continuing development of the research system within the country; and (3) Kenya became fully aware of the contribution ISNAR could make in helping it strengthen its research system, and also how to reap greater benefits from help available from the IARCs and other donors.

Background of cooperation

ISNAR's cooperation with Kenya was initiated in 1981 with a request for a review of the research system from the National Council of Science and Technology (NCST), with the support of the Ministry of Agriculture, the Ministry of Livestock Development, and the Kenya Agricultural Research Institute (KARI). During an exploratory visit it became clear that the two ministries, which controlled substantial elements of Kenya's agricultural research, were also interested in a comprehensive, integrated look at the whole system, including the university.

ISNAR's preparation for the mission

During the two months following the formal request, all sections of ISNAR's staff worked together in preparing the background document for the field mission. The communications and information section helped assemble

background information and documentation, including reports of studies by others, which were analyzed by the staff of the NARS and research sections. As part of the thorough preparation made for the mission, basic economic, agricultural production, demographic, socio-political, and institutional data were organized as a guide for the ISNAR staff and consultants involved in the system review and analysis, which provided the basis for continuing cooperation.

At the same time, ISNAR staff members from all sections discussed ways and means for reviewing and analyzing the Kenya system to yield the most meaningful results. They also helped identify consultants who not only had the necessary expertise and experience, but who could work as a team with the ISNAR core staff and the three Kenyans who were part of the mission, representing the NCST, the Ministry of Agriculture, and the Ministry of Livestock Development. Mission members worked well as a team in the field and subsequently in reporting their findings.

Identify training needs

Following the field work and developing recommendations, the mission findings were thoroughly discussed with Kenya authorities. The NCST approved the report's major recommendations. The review team identified personnel training as an important need in improving the research system's productivity. The Council recognized this and sent a second formal request -- that ISNAR conduct a detailed study of the system's manpower training requirements and prepare a training plan.

In responding to the request, ISNAR's team was formed, representing staff from the training and NARS sections, to work together with Kenya scientists in the study. The team included persons with expertise to analyze manpower needs, in the context of agricultural research disciplines and the appropriate disciplinary balance, and to recommend realistic training at all levels. The team's report was found to be highly acceptable, and its recommendations were approved by the Council.

Integration within Kenya

After the manpower report was approved, ISNAR recognized that an important part of the implementation process was building linkages within the country, and it increased its contacts with authorities in relevant organizations. These contacts made it easier to organize an interministerial group under the auspices of the NCST. ISNAR kept relevant donors informed of progress, too.

Following up on the recommendations of the manpower study, some Kenyans have attended ISNAR conferences on agricultural research management -- at Arusha in 1983 and Mananga in 1984. Several other Kenyans are taking advantage of fellowships offered by Australia, Canada, The Netherlands, United Kingdom, and United States, as well as participating in training programs offered by the international agricultural research centers of the CGIAR system and other organizations.

In 1984, Kenya requested an in-depth study of the country's agricultural research system by ISNAR, and preparation of a comprehensive, medium-term national research strategy and program

Deeper ISNAR involvement

After the Ministries of Agriculture and Livestock Development were merged in 1983, and a new professional administration was installed in positions of leadership, there was more immediate concern for balanced, integrated agricultural research development in Kenya.

By this time there was considerable appreciation of the value of cooperation between Kenya and ISNAR, and more of the ISNAR mission report recommendations had been implemented. Increased emphasis was put on training, and greater flexibility was introduced in program operation. Greater attention is now being given to the interaction between research areas.

Request a full-scale mission

By April 1984 the Ministry decided to proceed with a further request to ISNAR for a more in-depth study of the country's present agricultural research organization, management, and programs, and for preparation of a comprehensive, medium-term national research strategy and program. After further consultations with Kenyan authorities, ISNAR organized a team of core staff and consultants with expertise in the range of fields which would be needed, including dryland farming, veterinary and animal production research, research with a farming systems perspective, socio-economics, research/extension linkages, research station development, crop improvement and protection, agricultural education, and agribusiness.

All of ISNAR's sections again were involved in preparing the mission's work program to help it gather the in-depth information needed to prepare the kind of research strategy and plan Kenya requested. The research section contributed through its guidelines for reviews and evaluations, and through tools for analyzing the essential functions of research and their priorities. NARS staff called attention to existing and potential areas of research challenges. The previous analysis of manpower needs and

training requirements in which staff from ISNAR's training section participated was important in developing a training strategy for the national plan. All sections again helped identify consultants and develop the overall strategy and thrust of the study.

Interactions with Kenyans

The ISNAR mission worked closely with Kenyan staff in review and analysis of research policy, crops and livestock research, and research support services. A standing committee of senior directors of Kenya's research stations worked with the mission in defining the program and approach of the study and interacted with it on a continuing basis. This way, preliminary views and observations could be shared and tested, based on relevant local knowledge and principles.

A management training graduation certificate is presented to a Kenyan administrator.

In-depth analysis of the roles of research stations in the various agro-ecological zones of the country was emphasized, as well as management of soil and water resources, and developing nationally coordinated research programs. The actual and potential contribution of agribusiness to agricultural research in the country was an important consideration. There was continuing emphasis on developing human resources. The mission also stressed improved overall system organization and management.

ISNAR and Kenya have developed a strong partnership, working together to promote the effective use of current and additional resources to strengthen Kenya's system so it can plan and manage productive agricultural research for the development of the country. Such an ambitious program will require interaction at various levels of government, targeted support from donors contributing to Kenya's needs, and continuing cooperation.

Working together in planning and conducting the Bangladesh workshop

In December 1983, the Bangladesh Agricultural Research Council (BARC) requested ISNAR's cooperation in organizing and conducting several training workshops on various aspects of research management in Dhaka during 1984-85. After discussions of the idea and possible topics for the workshops, BARC requested that the first workshop deal with monitoring and evaluating its programs.

ISNAR agreed, and the "Workshop on Research Program Evaluation" was held in Bangladesh in early October 1984. The workshop's keynote address was delivered by the director general of the Agency for Agricultural Research and Development (AARD) in Indonesia, with whom ISNAR has cooperated in developing the evaluation process which is under way in that research system.
Information about that experience was shared with the workshop participants.

Overview of the workshop
The workshop focused on helping national research leaders become better managers by incorporating internal evaluations in their regular management practices, and using evaluation findings in programming future research. Information on manpower assessment, of current importance in Bangladesh, was also presented.

Training materials dealt with real current concerns of Bangladesh research leaders and were prepared in such a way as to be of general interest to participants from other countries in the region. In addition to the presentations, a document, "Readings in Research Program Evaluation," prepared by ISNAR especially for the workshop, provided the participants with material for future reference. Participants drafted a preliminary scope of work which will facilitate coordination of evaluations of research activities across programs and institutes. Formal proceedings are to be published and distributed.

Other organizations involved
In addition to some 30 high-level research managers and officials representing 12 Bangladesh research and development organizations, partici[illegible]s included agricultural research service leaders from Indonesia, Malaysia, Nepal, Pakistan, Sri Lanka, and Thailand.

The International Agricultural Development Service (IADS), which provides technical assistance to BARC with USAID funding, contributed a presentation to the workshop and took the lead on logistics for the training workshop. Representatives from most donors involved in the country also participated, including USAID, the regional FAO office, the World Bank, the International Development Research Centre (IDRC) of Canada, and the Japanese International Cooperation Agency (JICA).

Integration of ISNAR's efforts
An ISNAR staff person with expertise in the field of evaluation methodology took the lead in planning for the workshop and, working with BARC and IADS in Dhaka, developed an agenda.

All ISNAR sections contributed directly in preparing materials for the workshop:

- the "Guidelines for ISNAR Reviews and Evaluations," and checklists for preparing an evaluation scope of work were prepared under the leadership of the research section, with broad staff participation;
- the NARS staff directly concerned with ISNAR'S work on Indonesia's evaluations provided a test to verify the utility of ISNAR's guidelines and checklists;
- other staff members who were

All of ISNAR's sections were involved in planning and conducting a workshop on research program evaluation in Bangladesh.

involved in ISNAR's study of "conditions of service," and issues of manpower planning and personnel management in Thailand, as well as the assessment of manpower capacity and needs in Kenya which provided useful background for preparing materials, also participated in planning and conducting the workshop.

Helping build ISNAR's program to benefit others

The Bangladesh workshop teamwork contributed to ISNAR's body of knowledge, from which the whole staff can draw for work with other national programs. It contributed to this goal in five ways:

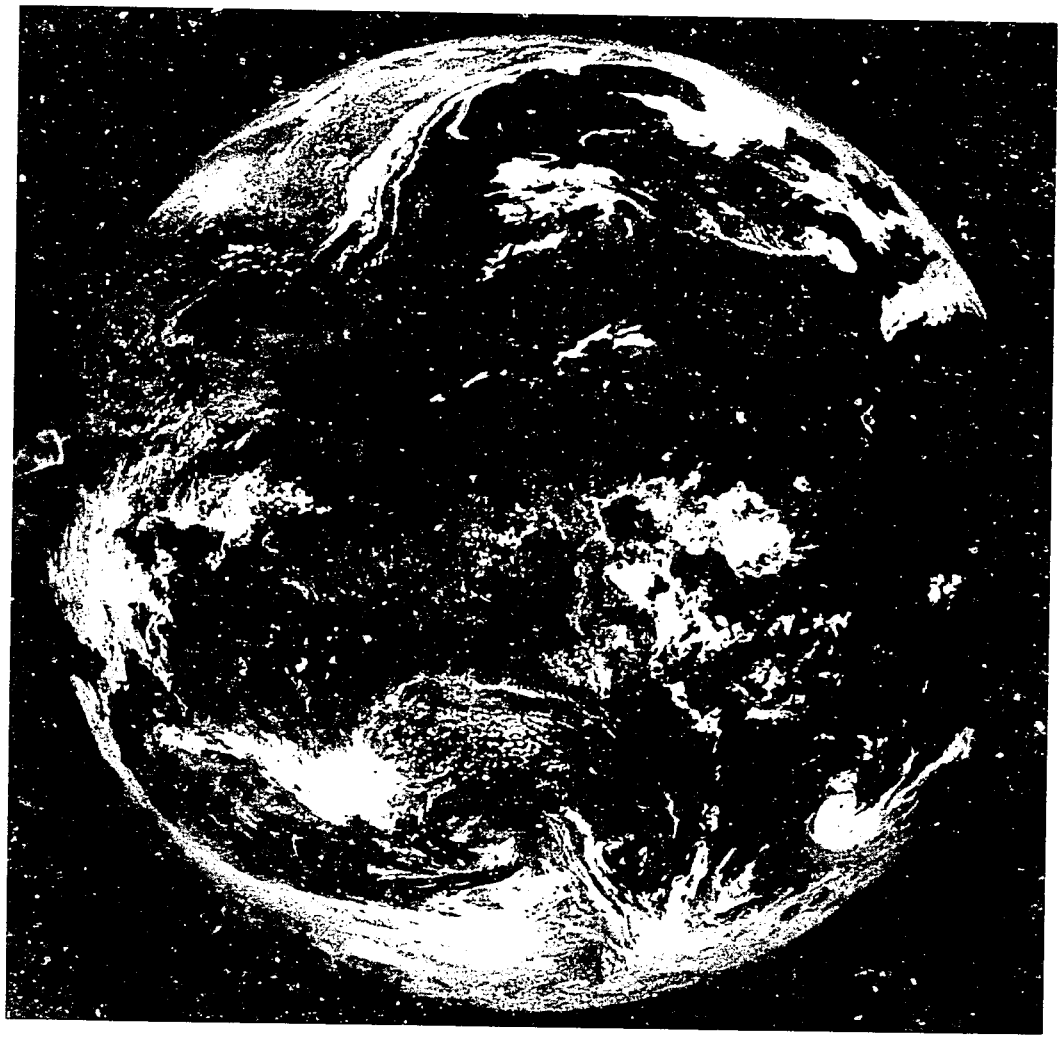
1. the full set of materials will be used again, with adaptation, for further evaluation training activities;
2. the information on evaluating research programs presented in the Bangladesh material can be used directly in continuing activities in other countries. For example, material written for the Bangladesh background document was found to be useful in continuing activities in Morocco and other countries;
3. part of the training materials were revised for use during an ISNAR-CIMMYT workshop in January 1985 and were expected to contribute to a section on evaluation at the Agricultural Research Policy Seminar in which ISNAR cooperates with the University of Minnesota;
4. as a result of discussions during the workshop, the checklists in ISNAR's own guidelines will be revised;
5. through such team efforts, ISNAR's staff can share ideas, test materials, maximize use of staff competence, and make greater use of what has been learned in its diverse activities for cooperation with others.

Morocco review initiates ISNAR's involvement in West Asia and North Africa (WANA) region

WANA is the acronym for some 25 countries in West Asia and North Africa. ISNAR's first major involvement in the region was the review and analysis of Institut National de la Recherche Agronomique (INRA), Morocco's national agricultural research institute, in 1984, and the development, in cooperation with leaders of INRA, of recommendations which should lead to strengthening the research system.

Senior staff joined review

The ISNAR staff and consultant team was greatly assisted by 10 senior Moroccan agricultural researchers who were released from all other duties for



Morocco is outlined on this photograph of Africa, taken from a satellite of the European Space Agency. ISNAR is increasing its involvement in the West Asia and North Africa region of the world.

Moroccan senior agricultural researchers participated in the review of their system, making the review a working seminar between ISNAR and the national staff

the full period of the mission and traveled with the team. Although the formal responsibility for the report and its recommendations rests with ISNAR, the main findings and recommendations were evolved jointly during the mission. In a sense, the mission was a continuing working seminar among ISNAR and the national staff.

ISNAR's relationship with Morocco developed rather quickly. The ISNAR review mission was in the field from mid-January to mid-February 1984, which included time for roundtable discussions of the mission's recommendations. Following submission of the draft report to the government, review of the draft, and discussion of preliminary steps for continuing activities, the final report was submitted to the Government of Morocco in September. By year's end the report had been approved by the government, and Morocco was already in the process of implementing most of the recommendations.

Advantages of joint participation

The ready acceptance of the report and prompt steps toward implementation may have been facilitated by the full participation of senior staff of INRA for the entire duration of the mission. This participation had three additional particularly beneficial effects.

1. There was an impact from the day-by-day discussions of research management issues which were of direct concern to all the research staff.
2. It gave staff members a strong feeling of constructive involvement in improving the management capabilities of their institute, as well as improving their own management abilities.
3. Mutual confidence and closer working relationships were established -- qualities which are important to further cooperation and successful continuing activities.

Work on programming by objectives

INRA and ISNAR embarked on a "different" approach to developing the research service program. They worked intensively to introduce the concept of programming by objectives and of relating budgets to programs rather than to subject matter divisions.

In the first ISNAR follow-up mission in late 1984, the feasibility of this approach was tested on some specific fruit tree research programs, and INRA staff gained confidence and greater capability to pursue this approach in Saharan and citrus agricultural research programs.

Other review mission recommendations

Major changes in the research system were recommended by the ISNAR mission and approved by INRA and the highest authorities of the Government of Morocco.

They indicate the kinds and scope of recommendations put forth by ISNAR teams. These include:

- a more functional organizational structure for the research organization; this included a drastic reduction in the research network from 68 stations to 26, and replacement of a number of experiment stations and application farms by more flexible and less costly "experimental sites" within the farming community;
- transfer of all non-research activities, such as INRA's seed multiplication program, to other governmental and private organizations;
- revision of the status of research personnel.

It is noteworthy that recommendations for structural, institutional, and administrative changes, requiring policy decisions of the government, were approved and started within a short time.

PROAGRO -- examining the role of private research in Latin America

The private sector has been heavily involved in agricultural research in Latin America in recent years. This involvement has been an important factor affecting the development of national institutes of agricultural research, which have supplied most of the new technological knowledge in that part of the world over the past 20 to 25 years.

Private-sector participation in agricultural research has changed the ways in which the national institutes of agricultural research function. It is important that ISNAR and the research institutes thoroughly understand the role of the private sector in the agricultural research and technology generation process, and its implications for ISNAR's work in Latin America as well as in other regions of the world.

These are the reasons for ISNAR's participation in a project called Agricultural Research Organization and Performance in Latin America (PROAGRO). The project is a collaborative effort between ISNAR, which acts as the executive agency, the International Development Research Centre (IDRC), which provides financial support, and a number of Latin American research institutions -- CISEA of Argentina, the University of Campinhas in Brazil, FLACSO in Ecuador, and IESA in Venezuela -- which carried out the research at the national level.
The general research strategy and approach was to develop a number of case studies which show typical ways in which the private sector does agricultural research, generates new technology, and diffuses that information.

Indicating the range and scope of the research, the case studies include the major pampean crops, as well as the seed and farm machinery industries in Argentina; food crops and sugar, and the alcohol, seed, fertilizer, and farm machinery industries in Brazil's Sao Paulo State; oil palm, maize, bananas, and the seed industry in Ecuador; and the institutional development of the "Fundación Servicio al Agricultor" (FUSAGRI) in Venezuela. An analysis

of the Latin American seed industry from the multinational perspective is also included.

At the end of 1984, each research team was preparing overall country-level reports covering the following topics:

- what determines the ways in which the private sector participates in the technology generation process;
- the impact of technological change on patterns of agricultural and agribusiness production, employment, and organization;
- the impact of private-sector research on public research institutions.

First drafts of the country-level reports were discussed at the project's second workshop, held in Buenos Aires, Argentina in August 1984.
The project's final phase, a comparative analysis of the country studies, is expected to be completed in the first half of 1985, at which time the research results will be published.

Members of ISNAR's staff with extensive experience in Latin America discuss the work of the PROAGRO project, looking at the role of private sector research in that region.

ISNAR continues its close cooperation with IFARD

The International Federation of Agricultural Research Systems for Development (IFARD) is an organization which provides an important forum for leaders of national agricultural research systems to share ideas and experiences among themselves, and with the international donor and scientific communities.

Its primary membership is made up of leaders of national systems and regional associations, with some IARC representatives. There are three regional IFARD groups: in Latin America, Asia, and Africa.

In 1983, ISNAR and IFARD signed a memorandum of understanding which provided for continued close cooperation between the two organizations. ISNAR's relationship with IFARD provides opportunities for discussion and interaction with national leaders on issues of agricultural research service development.

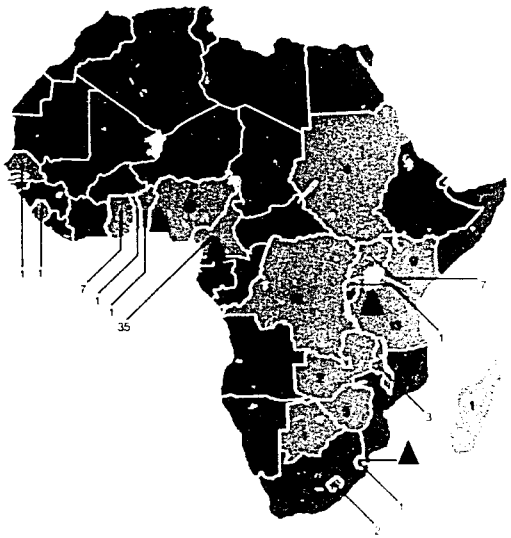
Some NARS have attained high visibility for payoffs from their research results and have experienced the positive effect on the policy environment. NARS leaders can share these kinds of experiences with leaders of other national systems through IFARD.

The complementarity of ISNAR's work and IFARD's objectives is obvious and manifests itself in several ways, including joint sponsorship of meetings and regional seminars.

Officers of IFARD, representing all regions of the world, meet at ISNAR headquarters.

Reports of ISNAR's continuing cooperation with other countries

Africa



ISNAR has responded to requests for management training in Africa by holding four workshops there. This map shows the location of the management training workshops and the number of participants from sub-Saharan countries who have attended.

(Previous page) ISNAR staff members discuss training plan recommendations with the Director of Zimbabwe's Department of Research and Specialist Services.

Zimbabwe requests ISNAR to prepare a training plan

ISNAR's involvement with a country can start in several different ways. Zimbabwe was selected as a country case study for management training requirements in the Cooperation for Development in Africa (CDA) program. The study findings helped ISNAR design training programs in agricultural research management.

Interaction during the study gave Zimbabwe some exposure to ISNAR and understanding of what it could do. Following this contact in 1983, ISNAR was invited to participate in the annual review of research and extension projects of the Ministry of Agriculture in August/September 1983. ISNAR participated in the discussions of the research programs, and of the World Bank research and extension project.

Then early in 1984, ISNAR was asked to undertake a study of training requirements and to prepare a training plan for the Department of Research and Specialist Services (DR & SS). ISNAR undertook the mission in March/April 1984. The study report and training plans have been accepted by DR & SS.

Later in the year, ISNAR was again invited to participate in the annual research review. The invitation was accepted, and ISNAR also contributed a paper on the multidisciplinary research approach.

Looking to the future, it is anticipated that ISNAR's major training strategy recommendations will be adopted, and training of Zimbabweans under this program is expected to commence in 1985.

Other IARCs help strengthen Somalia's research system

A wide range of institutions is involved in helping Somalia strengthen its agricultural research system. Building on the 1983 system review and analysis, ISNAR requested colleagues from several IARCs and U.S. universities in 1984 to help the Somalis plan new research programs for livestock and irrigation water management, and to revise the crops and soils research program.

Some results of ISNAR's broker role:

- IITA personnel helped plan the physical facilities at the main crops research station;
- ILCA personnel worked closely with University of California-Davis professors to help plan the livestock research program;
- a Colorado State University professor helped plan water management research;
- CIMMYT and ICRISAT scientists and resident FAO personnel helped revise the crops research programs;
- three Somalis participated in CIMMYT's mid-1984 maize training program;
- a private consultant was enlisted to help Somali research leaders focus on economic considerations;
- ISNAR helped in personnel management development and planning research with a farming systems perspective.

Assisting Somali scientists

In all these activities, emphasis was on the consultants assisting the Somali scientists and managers in planning their research program. The resulting Somali research system plan includes the direction and pace of each research effort, modest changes in research program administration, building essential physical facilities, bringing in technical assistance personnel to substitute for Somalis while they are being trained, and a 20-year horizon for developing the research staff.

Somalia expects the program to be funded and operating during 1986. ISNAR will continue to keep abreast of the system's evolution.

An ISNAR staff person is posted in Madagascar

At the request of the Ministry of Agriculture, ISNAR appointed a staff person to work with Madagascar's National Center for Research Applied to Rural Development (FOFIFA is the acronym for the French title). The staff person will help the ministry carry out the recommendations for further developing the research program and improving program planning as agreed to by the Ministry of Agriculture and ISNAR.

Implementing the request for an adviser and developing the continuing relationship involved several steps, intensive consultations, and cooperation with other organizations. Here is how it developed

Request for an ISNAR staff person

The original request came in early 1983. In June of that year, a representative of ISNAR visited Madagascar to define a position description and to hold preliminary discussions with Malagasy officials

regarding the protocol agreement for continuing activities.

In further developing its relationship, ISNAR staff returned to Madagascar in October for further discussions regarding the broader range of its continuing activities with the country. These included: participating in activities related to IRRI's program to cooperate with Madagascar on rice research; holding discussions with World Bank officials who were interested in responding to Madagascar's request for help in rehabilitating its research system; and meeting with Ministry of Agriculture officials as well as the newly appointed Minister of Scientific and Technological Research for Development. The meetings with Malagasy officials included further discussions of ISNAR's recommendations, following its review and analysis of FOFIFA.
In early 1984, after consultation with officials of the government of Madagascar, ISNAR appointed a staff person to start there in mid 1984.

Further developing the continuing relationship
In addition to ISNAR's visits to Madagascar, Malagasy officials have participated in activities at ISNAR. The Director of Planning and Coordination in the Malagasy Ministry of Research and a member of the Board of FOFIFA, paid a working visit to ISNAR in September 1984. Later, FOFIFA's director general attended a seminar at ISNAR, at which time there were further discussions of the continuing partnership.

Madagascar has made progress in improving governing systems by creating problem-oriented commodity departments; reorganizing administrative councils; reducing the number of research stations; building the scientific information base; and diversifying and increasing its foreign technical assistance.
Looking ahead, ISNAR and Madagascar are planning to further develop advisory services in research planning, programming, and evaluation; and are preparing a five-year national research program.

Also, plans are under way to computerize Malagasy agricultural research programming at ISNAR headquarters, and to organize and implement research with a farming systems perspective.

In its broker role, ISNAR is helping Madagascar contact potential new donors for assistance in training and research funding. Madagascar wishes to establish greater support and more diversified technical assistance by a larger group of donors to improve its freedom to define its research goals and priorities.

High-level officials review the Zaïre system

Indicating a high degree of commitment to reestablishing the quality and capability of the once world-renowned agricultural research system in Zaïre, top-level advisors to key government officials became involved in carrying out the study of the system. There was a reason for this arrangement: a recognition that a consensus on its structure was a necessary condition for the system's rehabilitation.

ISNAR team works with study group

Partial funding for the study, aimed at producing recommendations for reorganizing and restructuring the system, was provided within a USAID project. There were two key elements in this proposal. One was that the system review be conducted by a national study group rather than by outsiders. The other was that a neutral institution of international character work with the national study group to provide advice and assistance.

ISNAR, by virtue of its specific mandate, was considered particularly appropriate for this role and was invited to provide a team to work with the study group.

When the Government of Zaïre requested ISNAR's assistance in a study of its research system in January 1984, ISNAR accepted and proposed a visit to discuss with key Zaïrian officials their conception of the study, how it should be carried out, and ways in which ISNAR would provide assistance.

From ISNAR's vantage point, it is well known that it is necessary to work closely with national officers for full interaction during the review, in discussing the recommendations, and implementing a productive continuing relationship. Also, to effect significant change in a national agricultural research system, it is important to gain commitment at high decision-making levels of government.

It was agreed that the review would be carried out by a national study group, made up of high-level Zaïrian authorities representative of key offices within the government, and chaired by the agricultural advisor in the Office of the President. The study group was serviced by four working groups, which collected and analyzed information for it.

Develop a synthesis report

Essential features of ISNAR's relationship with Zaïre were that the national study group was established at a high level and was interdepartmental in character; so its consensus recommendations cover both policy and program issues. There were two parts to ISNAR's role: first, to help the working groups develop guidelines for the study and to help them in their work; second, to participate with the study group during the review, to carry out joint visits to research establishments, and work with it in developing a synthesis report.

A measure of the close working relationship which developed is the fact that the study group voted to

create an "enlarged study group" in which the ISNAR team was invited to participate as full members.

The report, which will be completed in early 1985, will describe and analyze essential elements of the research system and will include conclusions and recommendations for strengthening the system arising from the analysis and discussions. Although it will be a report of the Zaïrian study group, not an ISNAR report, it is expected that both Zaïrian authorities and the donor community will request ISNAR's continuing cooperation in implementing the recommendations.

Coordinating work with other agencies in Burkina Faso

Two factors are unique in ISNAR's review and continuing relationship with Burkina Faso. (1) The review and analysis of its agricultural research system in 1982 was conducted jointly by three organizations: ISNAR, the Food and Agriculture Organization of the United Nations (FAO), and the World Bank; and (2) an outposted officer with previous work experience with ISNAR was appointed by the government of Burkina Faso and financed by loan funds from the World Bank to serve as technical advisor to the director of the research system.

The review recommendations

The joint review of the Burkina Faso system was conducted from September 30 to October 29, 1982. Following clearance by the three institutions, the final version of the report was prepared by ISNAR and forwarded to FAO in late March, and official distribution was made in August 1983.

The major recommendation of the review report was establishment of a planning and programming unit within the agricultural research system, Institut Burkinabé de Recherche Agronomique et Zootechnique (IBRAZ). Such a unit would define national programs based on the government's priority objectives and the needs of the farming communities, with participation by IBRAZ and expatriate research workers, in close consultation with donors and technical assistance agencies in the country.

Donor agencies are important

The ISNAR-FAO-World Bank review and recommendations took account of the particular importance of donors and technical assistance agencies in Burkina Faso. It is in the hard-hit semi-arid Sahelian zone, to which many donors have directed substantial efforts. Because of this donor and technical assistance involvement, gathering reliable information about what the system had to work with was one of the first steps in establishing a planning and programming unit. This meant taking an inventory of research

resources and facilities, conducted by members of IBRAZ, the Ministry of Agriculture and Livestock, and the Ministry of Higher Education and Scientific Research.

This step was followed by a national workshop, including the two ministries, IBRAZ, and other relevant agencies, such as the extension service, to analyze the present situation and major objectives for IBRAZ. Procedures for program identification were established by the programming unit of IBRAZ. Committees were established to develop proposals for what each of the major programs should contain.

All agencies are involved

These proposals were developed with the active participation of all expatriate scientists from international technical assistance and donor agencies present in Burkina Faso. The program content proposals included objectives, justifications, resources available and needed, plan of work, and a five-year timetable.

The 12 programs have become part of the draft document of a coordinated National Agricultural Research Plan (NARP) and include: farming systems in different agro-climatic regions; animal production; soil and water, with fertilization considerations; sorghum and millet; cotton; rice; oilseed crops; fruits and vegetables; grain legumes; tuber crops; farm machinery; and maize.

Cooperation continues

Meanwhile, the interrelationships between the organizations primarily involved in working with Burkina Faso to strengthen its agricultural research system were moving forward. During the visit of the IBRAZ program coordinator and the World Bank advisor to ISNAR for the clients' seminar in late October-early November 1984, the state of progress and achievements in preparing the NARP were discussed. Also, related, continuing activities of the Bank and ISNAR in support of IBRAZ were considered.

Like an international seminar

ISNAR continues to work with Burkina Faso in processing the NARP report, and this process furthers the coordination of research efforts. Programming commissions have been established to review the draft in the country. The work of the programming commissions takes on the attributes of an international seminar, since all donors and technical assistance programs present in the country will participate, as well as representatives of political policy making and other important groups in Burkina Faso. The comments of the programming commissions will be taken into account in readjusting the NARP to be submitted to the Director of IBRAZ.

Elements of progress

Considerable progress has been made in Burkina Faso. The political will of the government to implement the recommendations of the joint ISNAR, FAO, and World Bank review mission has been strengthened. One national agricultural research plan has been

elaborated by all agricultural research workers in the country, with active participation of all expatriate scientists from international technical assistance and donor agencies in the country. And the programming unit of IBRAZ has been established as a central mechanism responsible for agricultural research program management, including coordination and evaluation, integrating all agricultural research and development efforts at the national level.

ISNAR helps build linkages and donor assistance in Rwanda

Rwanda's attention has been focused on improving agricultural technology out of necessity. It is a small central African country where nearly 6 million people are putting great ecological pressure on the land, while population is increasing at the phenomenal rate of 3.6 percent a year. The severing of many ties with Belgium, the rapid population increase, and the resultant pressure on the land encourage the country to give attention to strengthening its agricultural research system.

ISNAR has worked with Rwanda in this endeavor since 1981. The partnership of ISNAR with Rwanda illustrates the ways in which ISNAR creates and strengthens linkages with outside sources of help, as well as between and within national institutions.

Process starts with the review

This process starts with the review of the system itself. During the Rwanda review, the team's discussions involved more than 130 people from some 45 organizations in the country. The awareness of and concern for research was further heightened in Rwanda's case by a major week-long

The woman at right is one of the farmers chosen by researchers as a participant in a pilot project to test extension methods in Rwanda.

seminar held soon after the review. The seminar brought together 108 Rwanda residents, including government policy makers and scientists, 24 scientists from nine international centers, and 10 representatives from other research institutions and development agencies. Some 38 technical papers directly relevant to Rwanda were presented, and the review findings were discussed.

One important result of the review and the seminar, and of ISNAR's continuing relationship with the system, was developing and/or improving Rwanda's links with external sources of technology, including several of the IARCs.

Conform projects to objectives
With the strengthening of the national agricultural research system in Rwanda has come a substantial integration of effort. One project which has avoided contact with the national system, and was about to be stopped, is being continued and integrated.
Another project has been integrated into the national system. The point is that when a national system is not well organized and effective, development projects are often designed to avoid it. The common result is a hodgepodge of projects and wasted resources. A well-organized national system with well-defined objectives can deal with development agencies from a position of strength and can conform projects to the country's priorities.

There are other important aspects of ISNAR's continuing partnership with Rwanda. One is ISNAR's ongoing help in project preparation, looking toward IDA funding of Rwanda's Agricultural Research Project proposal.
This included many intensive discussions of plans and issues related to strengthening the research system.

Expand human resource base
Another is ISNAR's help in staff recruitment. ISNAR assisted in recruiting a person to head the administration and finance section of the Institut des Sciences Agronomiques du Rwanda (ISAR).

The Rwandan government has made a major recruitment effort: fourteen nationals have been recruited for the research system in 1983/84.
Adding the nine expatriates in four programs assisted by IITA, CIAT, USAID, and the Swiss government, this amounts to a virtual doubling of the research staff in less than two years.

In association with ISNAR, Rwanda is developing further plans for strengthening its human resource base. Looking ahead, plans are being made to get short-term training for several scientific and higher technical staff as part of the first phase of the World Bank-assisted project. Long-term training in agriculture, focused on farming systems research, will be undertaken with USAID assistance. Implementation of the ISNAR-recommended 10-year staff development plan, with some possible modifications, is foreseen for the second phase of the IDA-assisted plan.

Improve program formulation
ISAR also has made strides in its efforts to improve its mechanisms for formulating research programs. Starting in 1984, the program has been formulated on the basis of extensive discussions among finance and program staff, with the planning and programming advisor, and other ISAR staff being available for advice. This more effective system replaces the previous practice which merely consisted of assembling programs of individual research workers.

The programming and budgeting process, which ISNAR helped start with the ISAR crops staff in 1982 in the context of the Bank proposal preparation, is being further developed and extended to other departments.

Also, looking ahead, a more rigorous application of the agreed-on programming and budgeting principles will begin early in 1985.

Rwanda farmers will test these seed potatoes as part of the National Program for Potato Improvement.

First national training seminar held in Cameroon

While ISNAR started out simply to survey management training needs in Cameroon, the ministry concerned encouraged the survey team to look at wider management issues, made clear that it expected a concrete follow-up at the national level, and followed the process very closely. The resulting survey team report was published in French and English (Cameroon is a bilingual country) as an official ISNAR review report to the Government of Cameroon.

The report made detailed recommendations for a long-term training strategy and program which could be integrated into the managerial operations of the research institutes and their parent Ministry of Higher Education and Technical Research (MESRES).

Develop a training program
Cameroon moved quickly to implement some of the

recommendations, and the first MESRES/ISNAR training seminar was held in late September and early October 1984, within three months after approval of the report. A total of 34 persons attended the seminar, including administrators, directors, researchers, and technicians, as well as observers from other national institutions.

As a result of this seminar and its increased commitment to training its research personnel, the Government of Cameroon requested that ISNAR work with it in developing a long-term training program. Detailed plans for 1985 and 1986 have been formulated, and donors are being solicited to help in funding.

Trainees become teachers

The Cameroon management training seminar was the first ISNAR has held at the national level, reflecting the fact that it has put personnel management high on its list of research management priorities. Cameroon is putting strong emphasis on in-country training and cost-saving approaches, including mobilizing nationals to play a teaching role.

ISNAR is using experience gained from the Cameroon seminar in designing seminars in other countries. For example, with the different categories of personnel involved in this first country workshop, ISNAR identified specific training needs of different groups of personnel in a research system.

ISNAR and Sudan plan and develop a training program

In response to Sudan's expressed interest in management training for its staff, ISNAR invited representatives from Sudan's Agricultural Research Corporation (ARC) to take part in the ISNAR/ESAMI agricultural research management training workshop in July 1983. Three senior staff, including the deputy director, participated in the workshop at Arusha, Tanzania.

The success of this workshop led the ARC to ask ISNAR for further help in developing its management training program. ISNAR saw the opportunity to include Sudan in the CDA-sponsored survey of management training needs in Africa. ARC agreed and asked that the survey include a specific focus on strengthening its management under conditions of resource scarcity.

Suggestions for improvement

The survey team analyzed the ARC's various management functions and formulated suggestions for improving management -- in the short term through essential changes in procedures, and through a long-term management training program for different categories of ARC staff.

Meanwhile, the World Bank, which was working with Sudan in preparing a project on agricultural research, education, and extension in the irrigated sector, took note of ISNAR's report and conclusions. As a result the management component of the project may increase.

Ivory Coast looks at short- and long-term objectives

The ISNAR review recommendations to Ivory Coast dealt with short-term and long-term objectives. The short-term recommendations focused on creating two regional Ivorian agricultural research institutes with the mandate of programming and coordinating all scientific activities related to specific regional development problems. The long-term objective is creation of a national agricultural research institution able to absorb all foreign agricultural research institutes or units.

Research serves export crops

In Ivory Coast, most agricultural research is the responsibility of groups of rather autonomous research institutes, many of which are sponsored by foreign bilateral or international organizations.
Most research is conducted by a set of small agricultural institutes and laboratories, developed to serve industrial and export crops.

Nation in transition

Thus, Ivory Coast is a nation in transition. Agriculture is financially dominated by exports of cocoa, timber, and coffee. The value of these exports grew rapidly during the 1960s, then started leveling off in the late 1970s. Per capita agricultural production has decreased recently, bringing attention to the need for better technology to increase food production.

In September 1984, ISNAR was requested to participate in a World Bank identification mission for support to the agricultural research system. ISNAR will continue to work with Ivory Coast in strengthening its national agricultural research system.

Malawi implemented most research recommendations

Although ISNAR staff contact with Malawi has been limited subsequent to the 1982 review mission, nearly all of the recommendations coming from the mission report related to the Department of Agricultural Research have been implemented.

ISNAR continues to stay in touch with Malawi and maintains awareness of the progress of the program, which has been funded by USAID and another institution in a continuing relationship.

ISNAR joined an appraisal mission in Cyprus

An ISNAR staff person took part in an appraisal mission, studying the crop production research and extension program in Cyprus as a World Bank team member in July 1984.
ISNAR contributed to discussion of major issues and project preparation, especially in analyzing needs for added research and extension staff, plus preparing background papers on the research and extension systems.

The World Bank, having financed infrastructure development for more irrigated agriculture, was ready to support a project for strengthening the Cypriot research and extension services. This fell within ISNAR's mandate, and thus it added its input to the process.

Share research results with farmers
The study on research/extension linkages proposed formation of an Agricultural Research and Extension Council to speed dissemination of research results and recommendations to farmers.

Asia

Fiji's parastatal sugar industry has gained immensely from high-quality research carried out within and outside the country.

Working with a small country -- Fiji

ISNAR has observed that, in some small countries with a high-value export crop and an autonomous parastatal corporation focusing its research resources on this single commodity, research can have a high payoff. It might be expected that this high payoff would cause policymakers to understand the return on investment in research and would result in well-funded national agricultural research systems. This is not necessarily true. In fact, success with a high-value export crop may divert attention from research on food crops.

Benefit from sugar cane research

ISNAR's experience and observations in Fiji are interesting in this regard. Fiji is a major sugar exporting country and has gained immensely from high-quality research on sugar cane carried out within and outside the country. This research in the country is undertaken by a parastatal organization, the Fiji Sugar Corporation. While much of the more basic research on sugar cane has been conducted outside of Fiji, it has been closely monitored, adapted, and used in the country.

Understanding the value of research

ISNAR's review of agricultural research in Fiji, conducted in July 1982, found that the country could benefit from creating a new consciousness of the value of research at the political and policy-making levels, reviving the morale of its research service, and instilling a sense of confidence.

ISNAR realized that accomplishing these goals is not something that can be done in a short time or can be imposed from the outside. This meant taking a longer-term view and emphasizing, even more than usual, working *with* rather than *for* those in the agricultural research service.

An opportunity arose in 1984 as a result of a recommendation that came out of the original review of the Fijian system in mid-1982. The ISNAR team

found that there was nothing basically wrong with the present structure of the Research Division, and recommendations mainly dealt with consolidating the research services and making them function more effectively.

The team did note the desirability of the division's projecting a more positive image of research to policy makers in the government, and to gain greater involvement of users -- including farmers, the extension staff, and the various development agencies of the government. And, in order to provide a sense of direction and purpose, it was recommended that the Research Division should develop a medium- and long-term research plan in consultation with these groups.

Work in research planning

The opportunity to further work *with* Fijians was initiated in 1983 when Fiji asked ISNAR to help prepare a research plan, as recommended by the mission team. ISNAR responded with the recommendation for a joint planning effort. A joint study would ensure the deeper involvement of Fijians in the planning process for research so that, when the document was prepared, they would be committed to it, and they would have a better understanding of the methodology for establishing priorities and developing programs.

As a part of this exercise, carried out in 1984, ISNAR was able to help emphasize the importance of research in the development process and the involvement needed from the government. High government officials were brought into the process. The Minister of Primary Industries established a task force consisting of most of the heads of divisions in the Department of Agriculture, and other senior officials from different ministries, to collaborate with the ISNAR staff. The ISNAR staff also had discussions with top government officials to discuss the nature of the research plan and the support required from them.

The jointly prepared Fiji Research Plan considers the country's agricultural policy, outlines the basis for the proposed research programs and projects, details their contents, considers the staff and physical infrastructure requirements, and gives budget projections for the five-year period 1984-1989.

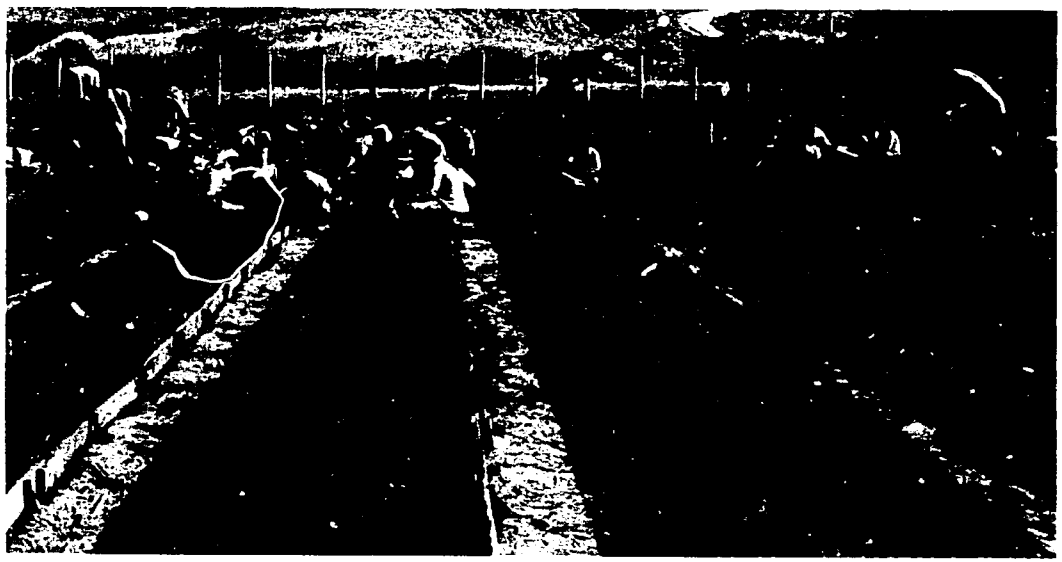
Impact of ISNAR's work

It is too early to assess the full impact of ISNAR's work with the Fijians. There is evidence of very satisfactory results from increased communication between research and extension. There is a better appreciation of the role of agricultural research in the Ministry of Primary Industries.

Many senior government officials have shown considerable interest in the ISNAR study; this has helped create a better policy environment for agricultural research in the country. The research service is increasing its initiatives. And, working with the ISNAR team, scientists of the Research Division are now more aware of the techniques and procedures of planning programs and projects.

The Fiji Research Plan is helping channel available scientific strength into well-conceived research programs with a long-term perspective. And its new training program for scientists is being planned with this perspective.

Workers prepare tree seedlings for distribution in Fiji's forestation work.



Indonesia increases its evaluation capability

Of the countries with which ISNAR has developed a continuing relationship, Indonesia has one of the more advanced national agricultural research systems. With cooperation from ISNAR, it is developing its own central evaluation and monitoring unit as a part of the system's organizational structure. This is a natural step in ISNAR's evolving partnership with Indonesia's Agency for Agricultural Research and Development (AARD).

How the partnership developed
ISNAR's involvement in Indonesia began in August 1981, with a detailed review of progress made by AARD in its first five years of operations. The review team also made recommendations for the possible reorientation of priorities, programs, organizational structure, allocation of resources, and external assistance during the next five years. When the review findings were discussed, AARD

requested ISNAR's cooperation in implementing some of the recommendations through a continuing relationship.

AARD asked ISNAR to cooperate with it in developing its proposal for a third World Bank loan for agricultural research. The previous Bank loans, which had helped the AARD develop its network of experiment stations, had been largely identified and developed by Bank staff. By the end of 1981, AARD felt it had developed sufficient internal competence to be able to develop the third loan proposal -- with some cooperation by ISNAR. Many of the recommendations made as a result of the review were incorporated into the proposal. The head of AARD wanted to assure that this loan reflects Indonesia's future priorities.

In working with AARD, ISNAR focused its work on jointly developing the methodology for preparing a detailed loan proposal from a set of broad policy objectives. As finally developed, and approved by the planning ministry, Indonesia submitted the proposal to the World Bank in 1984. The proposal reflects the conclusions of the ISNAR review and that part of ISNAR's mandate which calls upon it to help "national leaders identify which of their needs might be met through external aid."

AARD requests continued support

AARD requested that ISNAR continue its cooperation by helping develop a central evaluation and monitoring unit. Such a unit was foreseen in the second World Bank loan as an integral component of AARD's organizational structure.

In further discussions on this topic, the World Bank also encouraged ISNAR to work with AARD in developing the evaluation unit.

Fits ISNAR's work on evaluation

In October 1983, following further discussions, ISNAR agreed to work with AARD to develop, implement, and test an appropriate evaluation methodology. The task fit in well with an ongoing activity within ISNAR -- preparing a manual on evaluation methodology. After ISNAR developed the manual, it was modified to take account of AARD's structure and specific circumstances, and used in Indonesia.

AARD and the World Bank agreed that nine broadly similar reviews would be carried out over a three-year period. The reviews, which would cover the whole spectrum of AARD's activities, were to have similar formats and reports; so their conclusions could also serve to effectively update the AARD/ISNAR review conducted in 1981.

The first three sub-sector reviews were completed in 1984 -- horticulture research in February, palawija crops (essentially food crops other than rice) in July, and fisheries in November.

The reviews were conducted by teams of internal and external consultants appointed by AARD in consultation with the staff of the International Agricultural Development Service and ISNAR (which provides one of the joint secretaries to the review, and edits and publishes the reports on behalf of AARD). The external consultants include Indonesian scientists from outside of AARD and expatriate specialists -- drawn where possible from the international agricultural research centers and key donors in order to involve them in the review process. There has been considerable additional interaction involved.

Rice is a principal crop in Indonesia, and the subject of important attention in AARD's research program. This is a typical scene in the Indonesian countryside.

AARD's leadership in program review is increasing
In getting ready for the palawija and fisheries reviews, AARD scientists prepared briefing papers covering the complete terms of reference, and the papers were used as take-off points for both reviews. The horticulture review was used by the Asian Development Bank, and the palawija review by the World Bank, in loan proposal considerations. The palawija review report also was being used by AARD and USAID in preparing a new project loan for agricultural research.
A USAID fisheries mission was in Indonesia at the time of the fisheries review, looking at possible donor assistance to the sector, and the two missions interacted positively.

Further, AVRDC, CIMMYT, and former ICLARM personnel have assisted on review teams. The major agricultural research donors in Indonesia are all keeping close contact with the review process.

IBRD has indicated an interest in including the review process as a component of its third loan and has taken a positive viewpoint about the progress AARD has made in evaluation.

Indonesia is sharing its experience
Indonesia's experience in evaluation is now being shared with other NARS. At the invitation of the director general of the Bangladesh Agricultural Research Council (BARC), who visited the horticulture review, the head of AARD and the ISNAR consultant presented papers at a regional workshop on evaluation organized by ISNAR and hosted by BARC.

Conducting a joint review in Sri Lanka

In Sri Lanka, ISNAR was requested to join a national team in reviewing and analyzing its agricultural research system. This was not a simple undertaking, because responsibility for agricultural development lies within 10 ministries. There are research institutions in seven of these, as well as in the Office of the President.

As part of their future investment planning, the secretaries of the ministries responsible for agriculture met in April 1983 to develop a National Agriculture, Food and Nutrition Strategy, including research. An ad hoc Agricultural Research Group (ARG) was set up as one of a number of task forces working on strategy and planning. A major strengthening of the research system is contemplated, with possible financing by the World Bank. First, Sri Lanka must make some decisions about its research system, and that is not an easy process.

ISNAR's assistance is requested
In August 1983, Sri Lanka requested ISNAR's assistance in a joint review and analysis of the research system, along with ARG. In November, a six-person ISNAR mission was in Sri Lanka for 3½ weeks, interacting with a subcommittee of ARG.

In January 1984, ISNAR reviewed its conclusions with the ARG subcommittee and prepared a summary for the subcommittee's use with the World Bank and other government groups in Sri Lanka. In March, a preliminary joint report was reviewed with the full ARG, and modified sections of the report were sent back to the subcommittee. The report was used in April by a pre-preparation mission from the World Bank.
By June, the final edited version of the joint report was sent from ISNAR to the Government of Sri Lanka.

At year's end, the outlook was for work to proceed on the World Bank project preparation in early 1985. There seemed to be broad support for the conclusions of the joint report, but it had not yet been approved.
Major discussions on the National Strategy for Agriculture, Food and Nutrition had been delayed, and the research aspects are part of this comprehensive strategy.

Complex decisions involved
This process illustrates the point that many decisions about ways to strengthen national agricultural research systems frequently are part of a complex process. They can involve changes in government structure, some new ideas can upset traditional ways of doing things, and they generally require some time for modification and/or acceptance. ISNAR found that, despite the divisions among many ministries, the component parts of the research system work reasonably well. However, there is an urgent need for some national coordinating body to formulate national policy and priorities for agricultural research, and also to give due prominence to important problems that need an inter-ministerial research approach.

In ISNAR's experience, in comparison with similar countries, operational funding per research scientist in Sri Lanka is remarkably low. This merits early consideration to provide the well-trained scientists the support they need to better carry out their important work.

Human resources research
Meanwhile, in September and October 1984, Sri Lanka was one of three countries included in ISNAR's human resources research project, which involved four weeks of data collection and interviews at many research institutions. ISNAR's report to Sri Lanka will focus on important issues involved in formulating and implementing the major training program to be proposed as part of the project for which World Bank loan support is expected to be requested.

Papua New Guinea uses ISNAR recommendations

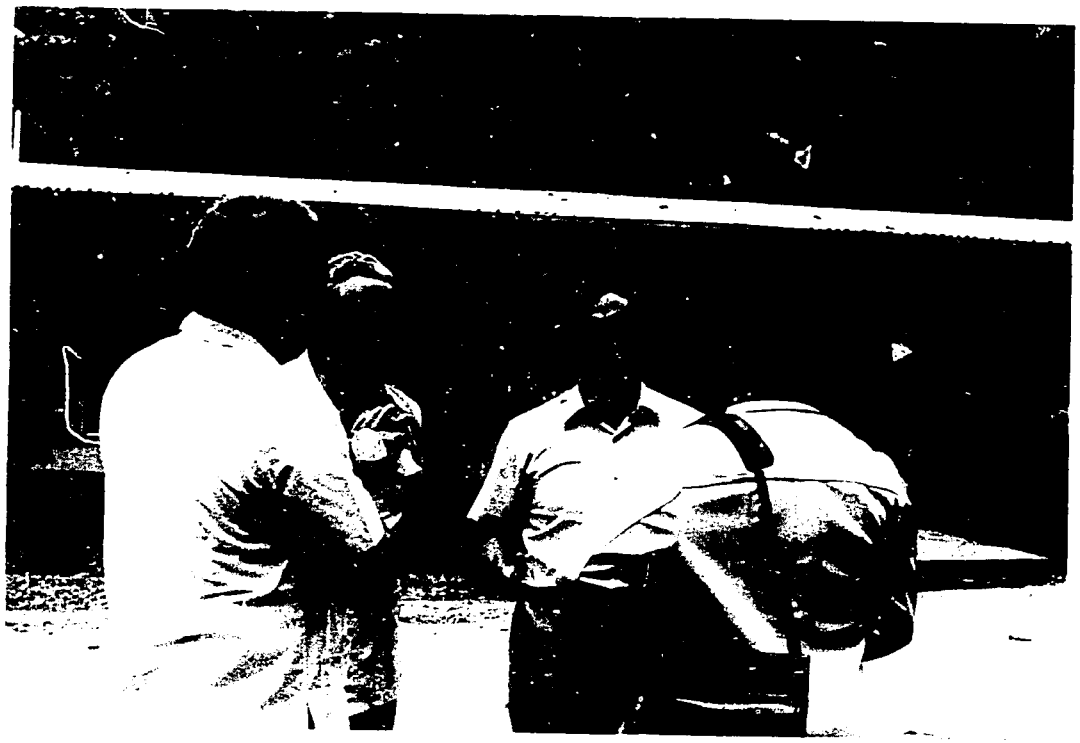
ISNAR's review of a substantial sector of Papua New Guinea's crops research program in 1982 was carried out against a background of a firm funding proposal from IBRD. Many of the review report proposals were accepted and made part of the Agricultural Support Services Project by the government in April 1983.

Develop multidisciplinary groups

Several of the recommended changes, which involved a substantial shift in agricultural research strategy and outlook, are being implemented. A major reorganization is taking place within the Crops Research Division, after much discussion and resolving difficulties. The main organizational change recommended in the ISNAR review was replacing the small disciplinary divisions with multidisciplinary groups organized along commodity lines. These changes have been put into effect in one department, and extra staff resources have been provided, even when recruiting has been severely curtailed.

Papua New Guinea has made informal requests for further assistance, and ISNAR will continue its partnership with the country in strengthening its crops research program.

A typical scene during an ISNAR review: team members compare notes during the Papua New Guinea review.



Work in Thailand focuses on human resource aspects

In 1983, the Royal Thai Government requested ISNAR's assistance in recommending new policies that would encourage research managers and scientists to serve at 19 agricultural research centers being developed under the National Agricultural Research Project. The objective is to reverse the current ratio of Bangkok to non-Bangkok postings among graduates, which currently is a dramatic 65 to 35.

Analyze personnel policies

ISNAR's collaboration with Thailand in this work began with an analysis of personnel policies for agricultural research staff, with particular reference to the staff conditions of service. The analysis is being carried out by an interagency commission; ISNAR is providing specialist staff support to the commission.

With assistance from ISNAR, the personnel division of the Department of Agriculture has collected and systematized personnel data. Ways of using these data for management purposes have been indicated, particularly in matching skills to tasks. Basic demographic, education, and career data on some 1,400 graduate-level employees have been collected. The end product of this joint exercise will be a data base on graduate scientists in the department which can be used for assessing current manpower and future needs, and provides the foundation for a permanent computer-based personnel record system in the department.

Working paper aids planning

In March 1984, ISNAR presented its first working paper to the commission, based on the data. The paper brought out several pertinent points: the large number of graduate personnel with the same job title; the high percentage (38 percent) of female scientists in the department; the high correlation between age and grade; and the relatively automatic nature of promotions from one salary scale to another. The working paper also presented a number of alternatives for action.

The commission is using the working paper to develop guidelines for recruitment and career paths. In its continuing activities, ISNAR will work with the commission in considering such issues as job descriptions, career paths, personnel evaluation procedures, and non-salary benefits for research scientists and managers.

Methods used by other systems

As is frequently the case, an important feature of ISNAR's work in Thailand is the development of an approach and methodology which can be used by other national agricultural research systems. Already, a similar program of work is beginning in Bangladesh and the data sheet which ISNAR helped develop in Thailand is being modified for use by the Bangladesh Agricultural Research Council.

In Pakistan, ISNAR's report had rewarding side effects

The report of ISNAR's review of components of the Pakistan agricultural research system was used as one reference in structuring a $50 million university development program at Peshawar in the Northwest Frontier Province and was a supporting document for renewal of a major research project by USAID. These are typical of the sometimes unexpected side effects of ISNAR's reviews and reports.

The chairman of the Pakistan Agricultural Research Council (PARC) asked ISNAR to help PARC examine the relationships between the new National Agricultural Research Center (NARC) and the provincial research institutes, the functioning of the national coordinated commodity programs, and the potential role of the universities in research in cooperation with the NARC and the provincial research institutes in Pakistan.

Develop center of excellence

The report urged retention of a combined federal-provincial system and cited improvements which could be made in the interactions between PARC and provincial scientists and administrators in the national coordinated commodity programs. ISNAR also urged that NARC be developed as a center of excellence that would back up the provincial units by strengthening, complementing, and supporting them.

ISNAR is keeping in touch with researchers both in PARC and the provincial institutes as they continue to develop their research capacities.

ISNAR helps Western Samoa plan a research service

ISNAR's work with Western Samoa now is at an advanced stage. Its second major document -- containing a research plan and project proposals for establishing a research division in the Department of Agriculture -- was sent to Western Samoa in August 1984. The six-chapter document resulted from ISNAR's detailed discussions with Samoan officials and others in the country in June 1984.

Requests further discussions

ISNAR's partnership with Western Samoa developed rather quickly. The review was conducted in August 1983 and included a study of work at the Nu'u Experiment Station, which provides the main focus for research in the country with the presence of a number of groups of expatriate scientists. The review mission's draft report was sent to the Samoan Director

of Agriculture in November – and ISNAR accepted Western Samoa's invitation to come for detailed discussions with the Minister of Agriculture and senior officials in the department in February 1984.

Western Samoa accepted the main findings and recommendations of the report and requested ISNAR's help in preparing a research plan, and in formulating the strategy and organization of the proposed research service.

Proposes a research plan

The resulting six-chapter ISNAR-Western Samoa document, calling for establishing a research division in the Department of Agriculture, discusses the rationale for research priorities in Western Samoa, proposes a medium-term research plan, suggests an administrative structure for the service, proposes a 10-year manpower development and training project, and projects the budget requirements of the proposed research service.

Samoan policy makers have responded favorably to the document's contents and have under review how they may best implement the research plan and strategy document recommendations.

A member of the ISNAR review mission to Western Samoa examines projects at a research station with a member of the extension service field staff. ISNAR continued program planning with Western Samoa in 1984.

Latin America

Impact of policy setting is shown in Dominican Republic

Creating an effective central coordinating body was found to be a basic requirement for strengthening the Dominican national research system. This was considered necessary to ensure adequate funding for research, to coordinate the work of the rese. centers, and to maintain channels of communication within the system, with producers, and with public policy makers. Only if this is achieved will the country be able to fully benefit from the available research resources.

ISNAR's central recommendation to the Dominican Republic was to create a new autonomous research institute, the Instituto Dominicano de Investigación Agropecuaria (IDIA). To implement this proposal, new legislation would be needed.

Nature of support and timing

Such an ambitious undertaking, requiring political action, would be possible only with the support of high officials and influential leaders, and with proper timing. ISNAR was invited to review the Dominican system in the early stages of a new administration committed to improving the system's efficiency. Furthermore, the food riots of April 1984, prompted among other things by increases in food prices, highlighted the need for aggressive technology generation and productivity increases in the agricultural sector in support of the country's development efforts, and provided a clear-cut incentive for implementing changes in the research system.

This commitment was reflected in the fact that the President chaired the meeting of the National Agricultural Council to which ISNAR reported its findings and recommendations. Additionally, other politically influential national leaders also recognized the need for change in the research system, knew of ISNAR's

work, exercised enough influence to cause the policy makers to take action, and were dedicated to reinvigorating the research system.

Counterpart support important
The commitment of a strong Dominican Republic counterpart to the ISNAR team was insisted upon from the very outset of ISNAR's involvement. This insistence recognized that, whatever the recommendations, effective implementation would require leadership and other skills not readily available in the research system so it would start developing them right from the start. Full participation of a national counterpart would also facilitate information gathering and provide opportunities for reactions to the recommendations as they were developed. However, it was stressed that responsibility for the report was to be ISNAR's alone.

Additional implementation steps
Since legislative action was necessary to assure that the needed administrative changes would be made, ISNAR and its Dominican counterparts recognized that several steps would have to be taken in their implementation strategy. A basic one would be to develop a proposal for the new institute which would be satisfactory to all parties concerned, so the Dominican Congress would approve the law implementing it.

Gaining the support of and commitment to the planned new institute were therefore essential. This included making contact and working with new top-level people as they came into the research system. As the process moved forward, new sectors came into the discussions -- the universities, extension, legislators, donor agencies, and other groups. They needed to be briefed and specific adjustments made to the proposals to ensure their support. Finally, once legislative action was assured, support for developing the specific organizational and management aspects of the new institute would be needed.

Consultant to help plan new institute
In June 1984 the Secretary of Agriculture decided to form a working group to oversee the implementation of the ISNAR mission's recommendations to create a new autonomous research institute. ISNAR staff visited the country to develop a work plan for the group. With the decision to move to the implementation stage of IDIA, anticipating passage of the legislation, ISNAR began actively participating with the Dominicans in specific aspects of the process. An ISNAR consultant serves as advisor to the Secretary to interact with the working group.

ISNAR performs its broker role
Specialized short-term consultants were brought in to supplement ISNAR's staff activities. As a first step in developing a new research plan, all on-going programs have been reviewed. ISNAR has assisted in developing the methodology and has acted as a broker for the reviews, requesting assistance from scientists from CIAT, CIP, CIMMYT, and ICRISAT. And ISNAR has concentrated its efforts on identifying sources of donor assistance needed for IDIA's development.

Costa Rica – ISNAR's first review in Latin America

ISNAR's mission to Costa Rica was its first to a Latin American country. It took place in February 1981.

Basic recommendation of the mission was that Costa Rica establish a separate research institute, connected with the Ministry of Agriculture and Livestock, to integrate all research functions -- the creation, adaptation, and transfer of technology. Upon presentation of the recommendations, the Minister and officials responsible for agricultural research activities accepted all the recommendations.

A new government took office in 1982, and since that time, further changes have taken place. ISNAR has continued its contact with agricultural leaders in Costa Rica and expects the working relationship to be significantly increased and strengthened in 1985.

PRECODEPA -- a regional potato research program

Within a relatively small area of Mexico and Central America, there were several pockets of expertise which could cover a wide range of problems facing potato production.

Pooling these resources could provide a major part of the potato expertise needed in the whole zone. This was the basis for establishing the Regional Cooperative Potato Research Program. PRECODEPA is the acronym for the Spanish title, Programa Regional Cooperativo de Papa.

PRECODEPA facilitates the transfer of technology among the national potato programs and looks for solutions to producers' problems.
PRECODEPA, with the support and cooperation of CIP and the Swiss Development Cooperation Agency (SDC), became operative in 1978, with Costa Rica, Guatemala, Honduras,

Mexico, Panama, and the Dominican Republic participating. In 1983, Cuba and El Salvador requested membership.

The SDC requested ISNAR's participation in a review of PRECODEPA, which was carried out in April 1984. ISNAR had long felt that PRECODEPA might serve as a model for similar regional research associations. The review focused on getting relevant information on PRECODEPA's strengths and weaknesses, and possible solutions to problems to help ensure its continuation. Some factors which account for PRECODEPA's success in strengthening potato research in Central America include regional priority setting, its adaptability to changing conditions, its contribution to strengthening national research programs, its linkage with an international research center (CIP), and a well-planned training program.

REDINAA is a regional network in Amazonia

REDINAA is one of several regional networks in Latin America which help national agricultural research systems operate jointly to avoid duplication of effort and to exchange results in a particular region, such as Amazonia. It also presents the opportunity for increased interchange with international institutions such as the IARC system, with which ISNAR can help in its broker role.

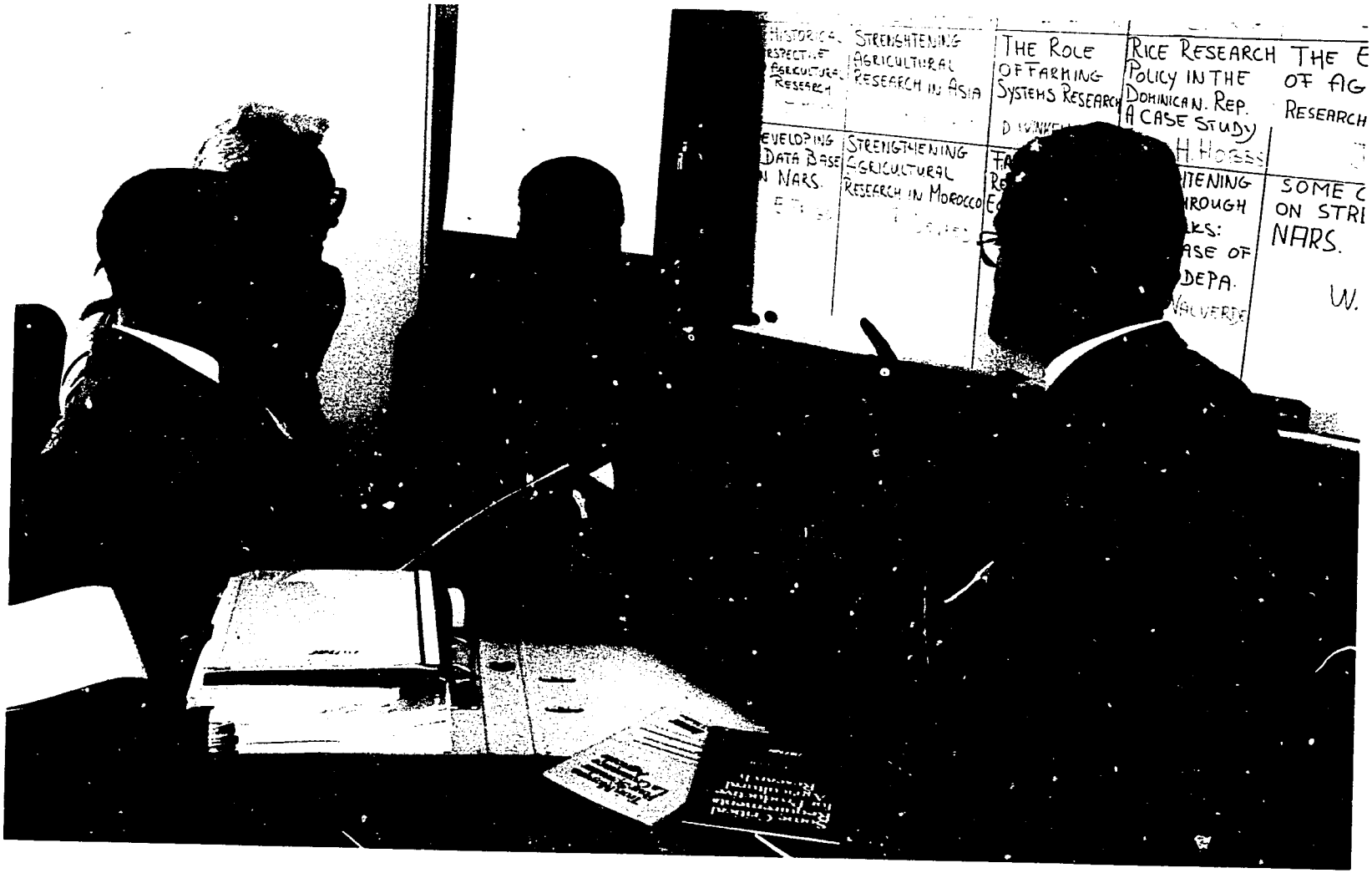
REDINAA is a regional scientific network promoting agricultural research in Amazonia. Its full name in Spanish is Red de Investigación Agroecológica para la Amazonia, or in English, the Amazon Agroecological Research Network.

This network focuses its efforts on integrating, strengthening, and utilizing national research institutions of its six member nations – Bolivia, Brazil, Colombia, Ecuador, Peru, and Venezuela. It grew out of a recommendation made at an international conference on Amazonian agriculture and land-use research, held at CIAT in 1980. ISNAR has supported and helped the committee appointed to lead establishment of the network since mid-1982.

At the request of the president of the steering committee, ISNAR is advising on establishing REDINAA as an institution with an executive secretariat, helping it to find potential donors and develop new projects conforming to the basic REDINAA document.

Members of ISNAR's NARS, training and conferences, and administration sections discuss plans for a seminar held at its headquarters.

A look at other sections of ISNAR's team



Emphasis on research management training was increased in 1984

Strengthening the human resource base of national agricultural research systems is the objective of ISNAR's training and conferences program. Weakness in research management is a key limiting factor in many NARS. Nearly all reports of ISNAR country review missions point to the need for manpower development and manpower training.

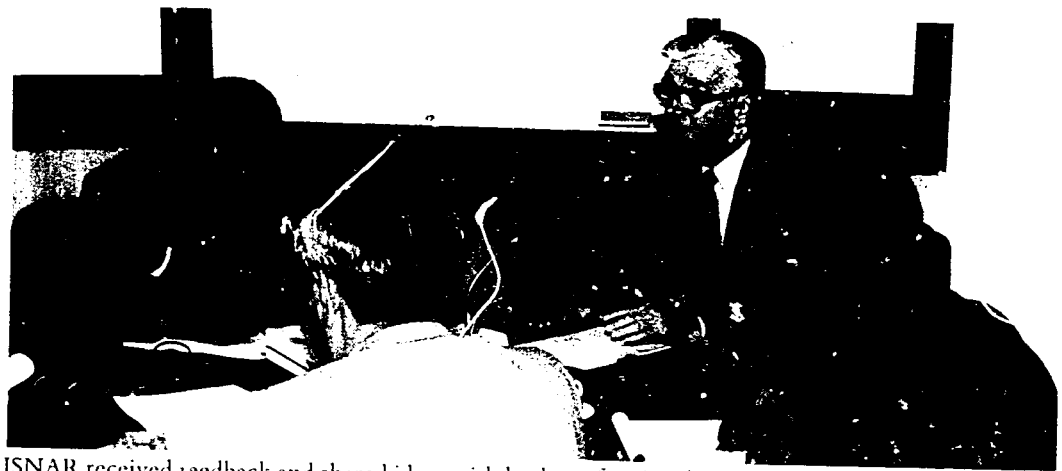
Thus it is logical that the three main activities of the training and conferences program -- conferences, management training, and human resource planning -- are aimed at the goal of strengthening the human resource base in NARS.

Early emphasis was on conferences
The relative emphasis on each of these activities is changing as ISNAR develops as an institution. In ISNAR's first years, there was emphasis on conferences and seminars, which provided opportunities for national agricultural research leaders to exchange ideas, information, and experiences with each other, and for ISNAR to get important feedback on agricultural research management issues to help it develop its program.

While other aspects of its programs have gained in importance, ISNAR continues to recognize the benefits of bringing together leaders of NARS, and other regional and international organizations, to discuss common problems and solutions through conferences, seminars, and similar activities.

For example, in October 1984, ISNAR held a seminar at its headquarters with leaders from countries with which it has worked most closely. Its purpose was to hear the views and evaluations of those leaders on the strengths and weaknesses of ISNAR's program -- and to find ways to improve continuing relationships. This is expected to be an annual event.

A conference in Jordan in October 1984, opened by the Minister of Agriculture, increased ISNAR's involvement in WANA.



ISNAR received feedback and shared ideas with leaders of national programs at its conference in The Hague, October 1984.

Hold WANA regional conference
Another example. With the addition of Arabic language capability, ISNAR responded to requests to increase its involvement with research systems in West Asia and North Africa (WANA) by holding a regional conference in Amman, Jordan in October 1984. Subject of the conference was "Potentials for Strengthening Management in National Agricultural Research." It was attended by some 30 participants representing 11 countries, and eight regional and international organizations.

As with the other similar regional conferences, the meeting presented an opportunity for ISNAR, national research leaders, and representatives of regional and international organizations to interact, to gain a better knowledge of problems, and to discuss ways in which they can work together.

A participant in ISNAR's management training workshop makes a presentation to fellow trainees to gain experience in communicating ideas which will be valuable in real-life situations.

Management training emphasis increased

In 1984, there was increased emphasis on skills training activities through research management training workshops. This involved developing training materials and training courses -- and teaching aspects of research management to groups of scientists, usually from several different countries. The precise objectives of management training vary with the level of participants in a seminar or workshop. At the international level, general management issues are presented to senior officials. At the national level, emphasis is on more specific management subjects for a wider range of personnel participation.

The increased emphasis on research management training has brought greater involvement of the whole of ISNAR in the workshops.

An important input to ISNAR's management training program comes from senior staff involved in the review, planning, and development of NARS. The research section has been similarly involved. Staff in the publications section is considering how some of the more successful materials developed for the workshops can be issued as self-teaching manuals.

Why management training is important

There is a logical reason why agricultural research leaders need training in management techniques. Most senior personnel in NARS have excellent scientific qualifications. However, skills required for *managing* agricultural research are quite different from those required for *conducting* agricultural research. Thus competent researchers promoted to managerial posts may find themselves facing problems for which they have not been trained, such as financial control, managing people, allocating resources, or coordinating with other organizations.

ISNAR's increased emphasis in this area is aimed at helping agricultural research managers develop their management skills so they can make more effective use of resources available to them. Through the

workshops, research managers learn more about relevant organization, planning, and management issues of their systems -- and become more proficient in dealing with them.

Heavy involvement in Africa

Case studies are used in the workshops. A total of 17 have been completed, with support from special project funding under the Cooperation for Development in Africa (CDA) and UNDP/CIMMYT programs. Developing materials for management training is expected to be a continuing process, reflecting varying and changing needs of participants.

Other participants listen to the presentation (opposite page) and make suggestions for improvement.

In 1984, ISNAR delivered the third regional agricultural research management workshop in anglophone Africa, at Mananga, Swaziland. Management training activities were initiated in francophone Africa in 1984, with a workshop in Cameroon, which also was the first management training workshop to be delivered at an exclusively national level.

Thus, ISNAR is helping to establish management training in Africa as an important tool for strengthening NARS.

Other workshop and seminar activities

ISNAR also participated in an Agricultural Research Policy Seminar, cosponsored with the University of Minnesota, in Minneapolis, Minnesota (U.S.A.), in April 1984. Emphasis in the seminar was on learning how to work more effectively with policy makers in gaining support for national agricultural research systems.

ISNAR also cooperated with the Agricultural University at Wageningen, Netherlands in a workshop on "Agricultural Research Policy and Organization in Small Countries," in September 1984.

Through conferences, management training, and human resource planning ISNAR is helping developing countries improve agricultural research management

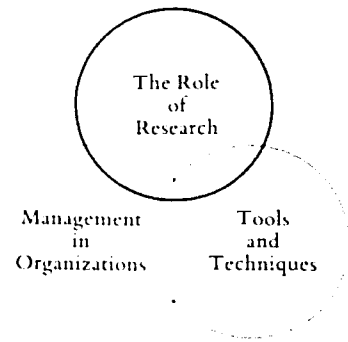
Human resources planning work
In the third area of ISNAR's activities in the training and conferences program, it works with national programs in carrying out analyses of various human resources issues. These are discussed in greater detail in reports of ISNAR's continuing activities with national agricultural research systems. In the main thrust of its human resources activities, ISNAR works with NARS:

- to analyze the professional characteristics of research personnel;
- to project future personnel and training needs;
- to review job classifications, career patterns, and evaluation procedures;
- to develop incentives for research personnel.

In these ways – conferences, management training, and human resource planning – ISNAR is addressing the nearly universal need of developing countries to have adequately prepared research managers.

ISNAR's approach to management training is illustrated by the Mananga workshop

The research management training workshop conducted at the Mananga Agricultural Management Centre in Swaziland, from July 9 to August 3, 1984, provides an example of ISNAR's perspective on and approach to such training activities.



Important interrelationships of a research manager's activities are indicated in the illustration above.

The Mananga workshop was the first four-week course; previous management training courses were of two weeks duration. Participants had been requesting a longer course, asking for more time for more training in more areas, even though there is a very intense level of presentation of material.

The Mananga management training is designed around three interlocking facets of the research manager's activities. These include the role of agricultural research, management in organizations, and the tools and techniques they use.

The role of agricultural research
Viewing research management from the perspective of agricultural development is basic to analyzing the issues research managers face, so they can put first things first in their decision-making roles.
Participants are asked to consider such questions as their research priorities, how they should allocate their resources, how they can best plan, implement, and evaluate research activities, and how they can best deliver research results to end users.

Examination of this perspective involves case studies drawn from real situations worldwide, followed by group discussions and seminars.

Management in organizations
Since research managers work in organizations, it is important that they learn principles of day-to-day organization life so they can accomplish the goals of agricultural research. In this part of the training, participants deal with such topics as motivating people, managing meetings, and learning how to improve the effectiveness of organizations.

The approach here is a group project, in which participants examine the realities of managerial life within their own organizations. Participants from many different countries and systems bring breadth to this subject -- one of the benefits of the Mananga course situation. Experiences and problems of every course member are relevant to the interests of others, leading to stimulating, interesting discussions and broadening of individual perspectives.

Tools and techniques of management
Rounding out the interlocking aspects of the research manager's job is effectively using management tools and techniques to analyze problems and overcome them in an organizational setting. These skills include the ability to plan, prepare, supervise, and monitor projects, write and orally defend plans and budgets, and maintain budgetary control.

In the management training workshop, participants learned these skills by actually doing such planning, presenting their project proposals, and defending them in front of other course members.

Teaching staff and equipment
ISNAR and the Mananga Centre provided most of the experienced teaching staff for the workshop. Each participant had the help and guidance of an individual tutor for personal study. Modern equipment was available, including closed-circuit television, microcomputers, and films. Video recorders enabled participants to see themselves in discussions and to review their oral presentations.

A part of ISNAR's self-monitoring is getting feedback and participant reaction in order to improve future workshops.

The student body and instruction staff of the 1984 Mananga training workshop. ISNAR worked with the Mananga Center in planning and running the workshop.

ISNAR's research program to increase its knowledge base

Development of ISNAR's research program can be roughly divided into two time periods.

Through 1983, the research section devoted its efforts to developing organization and structure. Its work began with an analysis of ISNAR's field experiences, from which several important research topics of importance to ISNAR emerged.

In 1984, ISNAR continued to develop its research on topics begun in 1983 and initiated several new projects designed to expand its general knowledge base and deepen its understanding of particular issues. The program is increasingly able to respond to the needs of the training program and country review missions.

The primary objective of the research program is to complement ISNAR's other activities in strengthening national agricultural research systems. It does this in three ways:

1. by improving ISNAR's analytical ability and working methods;
2. through generating basic data and information which can be used to compare national research systems and help NARS leaders make management decisions;
3. by conducting research and developing information about the nature and functioning of NARS which can be used directly by ISNAR staff members in their work with the systems.

Increasing its pool of knowledge

Most studies of the agricultural research sector have concentrated on the economic analysis of the rate of return to investment in the sector. Not much attention has been given to how research systems are organized or how they function.

Most currently used concepts about organization and management of research systems have evolved out of experiences in developed countries. Most of the time, such experiences are not directly applicable to conditions facing the NARS of the developing world. ISNAR seeks to increase the pool of knowledge about agricultural research and to develop organization and management concepts that are relevant to the NARS in the developing world.

The finished products of the research section can be used directly by national agricultural research systems and by staff of the training and NARS sections in ISNAR's team approaches to working with national systems.

Research works with other groups

ISNAR's research program is not limited to what can be done by its small research staff. Every ISNAR mission is a potential research project. In this respect, ISNAR's research section tries to make sure the benefits of its experiences feed back into its collective memory. It attempts to capitalize on ISNAR's two points of comparative advantage in carrying out research in this field -- its continuing in-depth contacts with a wide range of countries, and the pool of expertise available in the NARS and training sections.

ISNAR emphasizes collaborative work with national research institutions in

studying problems of the systems. It also collaborates with academic and other institutions in both the developing and developed worlds. This enables ISNAR to extend its limited resources and, by involving national researchers, facilitates diffusion of the results of its work.

Examples of its basic strategy
ISNAR's basic research strategy of using its field experiences and collaborating with other research institutions may be demonstrated by a few examples of projects.

From analysis of the planning and review missions it developed a systematic approach to organizing and executing reviews in the form of a manual, "Guidelines for ISNAR Reviews and Evaluations." This work responded to a need to gain greater comparability of results. In 1984, a number of special topics requiring further research emerged as a result of this initial work.

There are two notable examples in 1984 of collaboration with other institutions on research of common interest. One is with PROAGRO, dealing with the role of private sector research in Latin America. (Preliminary results of this work were presented at a workshop in Buenos Aires in August 1984. Final papers will be revised and published in 1985, together with a comparative study of the cases analyzed.) The second is with the East-West Center of the University of Hawaii (U.S.A.), dealing with information exchange among research, extension, and farmers in the South Pacific. This project was completed in 1984, and findings of the research were reported in three publications.

Developing interim products
Two research publications produced in 1984 make ISNAR's approach more explicit to its clients, staff, and consultants. Work on evaluation methodology led to preparing the "Guidelines for ISNAR Reviews and Evaluations." Review of ISNAR's experiences in more than 20 countries

during its first three years of work resulted in a paper "Considerations for the Development of National Agricultural Research Capacities," which highlights the most important functions of a research system and the problems it faces in improving those functions.

ISNAR undertook further work in the area of evaluating and monitoring research programs in preparing for the Bangladesh "Workshop on Research Program Evaluation." This work resulted in publication of background papers for participants' use.

Projects undertaken in 1984
Individual research projects were undertaken in 1984 on topics identified as important during ISNAR's earlier analysis of its planning and review missions. They are aimed at expanding ISNAR's knowledge of how NARS function in particular areas.

The PROAGRO project is an example of the ways in which ISNAR collaborates with other institutions on research of common interest. Involved were research institutions of several South American countries.

One of the aims of ISNAR's research program is to strengthen its own capacity to help national agricultural research systems

First, a study of different ways NARS are organized and governed, and how their fit with their environment affects the way in which the systems function, was initiated in 1984. This study is expected to include field work in relation to specific organizational forms.

Study investment in research

In a second project looking at particular functions of NARS, ISNAR is identifying the economic and structural characteristics of countries which are associated with high levels of investment in agricultural research. These findings will help in approaching the larger issue of influencing the policy environment in which national agricultural research decisions are made. They also are expected to lead to more refined indicators for judging the level of effort which might be expected in a given country.

A third area involves research on human resource issues. This has taken two directions. One is seeking ways to integrate manpower planning into overall country research system planning. A case study in Sri Lanka provides a base, and ISNAR expects to follow up with additional studies. The other involves developing methods for analyzing conditions of service of research personnel. In this research, ISNAR is analyzing data from several NARS missions.

The aim of the human resources research is to build useful tools for measuring appropriateness of reward structures and their coherence with training programs in developing and retaining high-level manpower. Initial studies in this area show striking differences among countries in the importance and role played by formal education, seniority, gender, and location in determining researchers' salaries.

ISNAR expects to develop a way to include such analyses as a regular part of NARS reviews, expanding the areas in which it can offer assistance.

Summing up ISNAR's research program

ISNAR's research program, aimed at strengthening its capacity to help national agricultural research systems, has been defined, its work programs are in hand, some published materials are available and being used, and additional materials soon will be forthcoming.

Building a data base of comparable information

An initial study by ISNAR and the International Food Policy Research Institute (IFPRI) resulted in a publication on allocation of resources to agricultural research in the Third World during the 1970s.

This publication was much in demand because it provided a comparative analysis of different regional and country situations. However, the data suffered in that they were collected from a variety of sources which were not necessarily compatible. They were drawn from different periods and used different classifications and terms for key variables.

Collaboration with IFARD

To address this deficiency, it was deemed important that ISNAR construct a data base on the structure, activities, and allocation of resources of NARS. Such a data base would be important to the NARS because it would enable research leaders to see where they stand in comparison with other "similar" systems.
Such comparisons would be particularly useful in discussing their situation with national policy makers.

ISNAR embarked on a data base project in 1984. In close collaboration with the International Federation of Agricultural Research Systems for Development (IFARD), it undertook a survey of NARS which is expected to generate a body of comparable information from many countries.
In September 1984, the president of IFARD contacted senior research authorities by letter to explain the survey, followed by a letter from ISNAR's director general. Response by year's end was encouraging.

Information being gathered

The survey is in three parts. In the first part, each country respondent is asked for current information about the structure, organization, and activities of the country's system. Respondents are asked about such factors as how programs are coordinated, how research is funded, numbers of trained scientists and support staff in the system, and how many are in training.

The data base will enable ISNAR to generate a body of information which is comparable across countries and will help research leaders analyze their own systems

In the second part of the survey, information is requested about the evolution of the system and its component units. The third part deals with current information about staffing, funding, and activities of the principal component units of the system.

By consulting ISNAR staff members and contacts in other international organizations, the survey researchers identified the most appropriate authority in each country to receive the questionnaire. The survey was sent in the appropriate language -- English, French, or Spanish -- to some 130 countries. For the Arab countries, the survey is implemented through an agreement between ISNAR and the Arab Organization for Agricultural Development (AOAD).

Uses of the results

ISNAR intends first to publish a primary data base which will make the information received available to research leaders in a form that permits them to analyze their country in relation to groups of "similar" countries, classed by region, ecological zone, or income. To this end, data provided by the survey will be supplemented with data from published sources describing the country.

The combined information will paint a clearer picture of the flow of resources and information to agricultural research in the various regions of the world. It will enable ISNAR to generate a body of information which is comparable across countries and will help research leaders analyze their own systems internally. It will also be useful to the international scientific and donor communities.

At ISNAR, the data will be useful in analysis aimed at improving the service's understanding of how national systems function, and will help identify topics for special follow-up surveys and research in collaboration with the NARS.

Publications make ISNAR's findings more available to others

ISNAR publishes in English, French, and Spanish. In 1984, several publications in one of these languages were translated into the other two languages. Also, one document was published in Arabic.

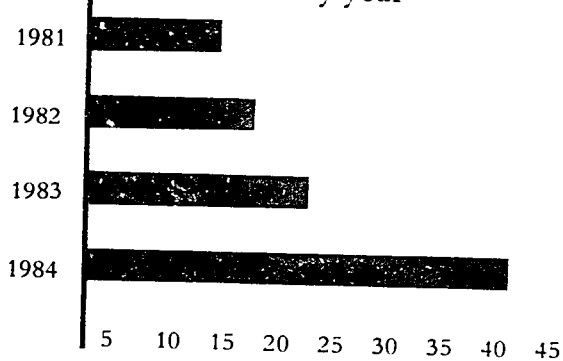
Publishes in six categories
Nineteen eighty-four was by far the most productive publishing year in ISNAR's history with a total of 41 publications released. ISNAR currently issues publications in the following six categories.

1. Country review reports.
   ISNAR's major thrust of working with national agricultural research systems has resulted in its publishing a large number of country reviews. This has been by far the major effort of ISNAR's publications program.

2. Agricultural research management publications. Some of these have been broad in scope, such as Mosher's "Critical Requirements for Productive Agricultural Research". Others have dealt with research management in specific countries or geographic regions.

3. Proceedings of conferences, seminars, and workshops.
   Useful, substantive information comes from meetings with NARS leaders, other IARCs, and other clients and experts in areas in which ISNAR works. When the material is of sufficient general interest, ISNAR makes printed reports of these meetings available.

Publications by year



4. General publications.
   ISNAR provides publications describing itself and its activities to a wide range of relevant, interested audiences. These include the annual report and special leaflets.

5. Reprint series. In October 1984, ISNAR reprinted from a non-ISNAR publication the first in a series of significant articles and papers on subjects relating to its mandate, for use by a wide audience.

6. ISNAR Newsletter. Also in October, the first issue of a newsletter was published. The purpose of the newsletter, expected to be produced four times a year, is to present informal, brief, newsworthy articles about ISNAR's work.

Through its publications, ISNAR acquaints national leaders, donors, and others with the results of its work.

Publications are central to ISNAR's program and activities.

ISNAR's library program complements other activities

ISNAR's library provides an important information resource for staff members and others

ISNAR's library and documentation program serves as an important information resource for staff members. It also serves important outreach functions.

An ISNAR information resource
ISNAR's library program provides essential information back-up to all other ISNAR programs, thus supporting the staff directly involved in strengthening NARS in developing countries. During 1984, the number of new items acquired each month for the library was doubled as compared with 1983. The library holdings were expanded to some 3000 documents.

Also in 1984, the computer workstation in the library was fitted with a telecommunications board and a modem enabling ISNAR to access large, international databases, such as FAO's Agris, the Commonwealth Agricultural Bureau (CAB), and Agricola, at the U.S. Department of Agriculture's National Agricultural Library. Comprehensive literature searches can be carried out.

bibliographies prepared. The modem also makes it possible to transmit text for publications from ISNAR's word processor to printers by telephone, thereby reducing printing costs and eliminating the likelihood of typesetters introducing errors into manuscripts.

Helping ISNAR's links with others
Activity in the library program increases the effective distribution and use of ISNAR publications.
In cooperation with the publications program, it ensures that ISNAR publications are brought to the attention of agricultural research workers and policy makers around the world. One way it performs this function is by setting up a network of repository libraries -- major libraries that have agreed to take all ISNAR publications and make them available to their users. Also, plans have been laid for all ISNAR publications to be indexed and abstracted for the world's major agricultural databases.

For the future, ISNAR is looking towards ways to directly assist NARS managers by serving their information needs. A proposed agricultural research management information service, for identifying, collecting, and disseminating literature on agricultural research management, is one example.

Through its computer communications, ISNAR can access large international data bases to conduct comprehensive literature searches and prepare bibliographies. It also can transmit text by telephone, speeding transmission and improving linkages.

Special projects contribute to ISNAR's work and growth

ISNAR's special projects activity increased substantially during 1983 and 1984, and is expected to continue to do so. This increase is a direct and natural consequence of the growth of ISNAR's core-supported activities. After a half decade of work, there are logical reasons why ISNAR's core programs need to be reinforced by extra-core activities.

Support continuing activities
ISNAR's major core-supported activities in working with national systems will increasingly be directed toward continuing cooperation with countries with which it has worked, and less with reviews of new systems. Such continuing cooperation in strengthening agricultural research systems frequently involves developing activities and projects which require financial support not available from ISNAR's core budget.

For example, as a consequence of an intensive country study, a continuing activity might be a series of in-country seminars on selected agricultural research management topics. This is what ISNAR is doing in Cameroon under a USAID/Overseas Development Administration (ODA) supported special project.

Another example: After a review mission's comprehensive recommendations are discussed, a country might request the follow-up support of an ISNAR staff officer posted in that country.
This is the pattern followed in ISNAR's special project with the Government of the Democratic Republic of Madagascar -- with loan funds provided by the IDA.

The Governments of the Netherlands, United Kingdom, and the United States are providing special project funding for some aspects of strengthening the research systems in Kenya, Somalia, and Zaire.

The IDRC-financed special project, Agricultural Research Organization and Performance in Latin America (PROAGRO) is studying the private

sector's role in agricultural research development as a basis for ISNAR's future work in that and other regions.

Helps develop growth points
Increasingly, ISNAR's special projects provide mechanisms for identifying and developing growth points.
The UNDP-backed special project, Study of the Integration of IARC Activity in Southern Africa, is exploring and evaluating ways in which the IARCs can work together more effectively in southern African countries. Lessons learned from that experience should be transferable to other regions.

Another special project, Preparation and Presentation of Case Studies, carried out in collaboration with CIMMYT and UNDP, responded to the growing need for teaching materials to be used in agricultural research management training.

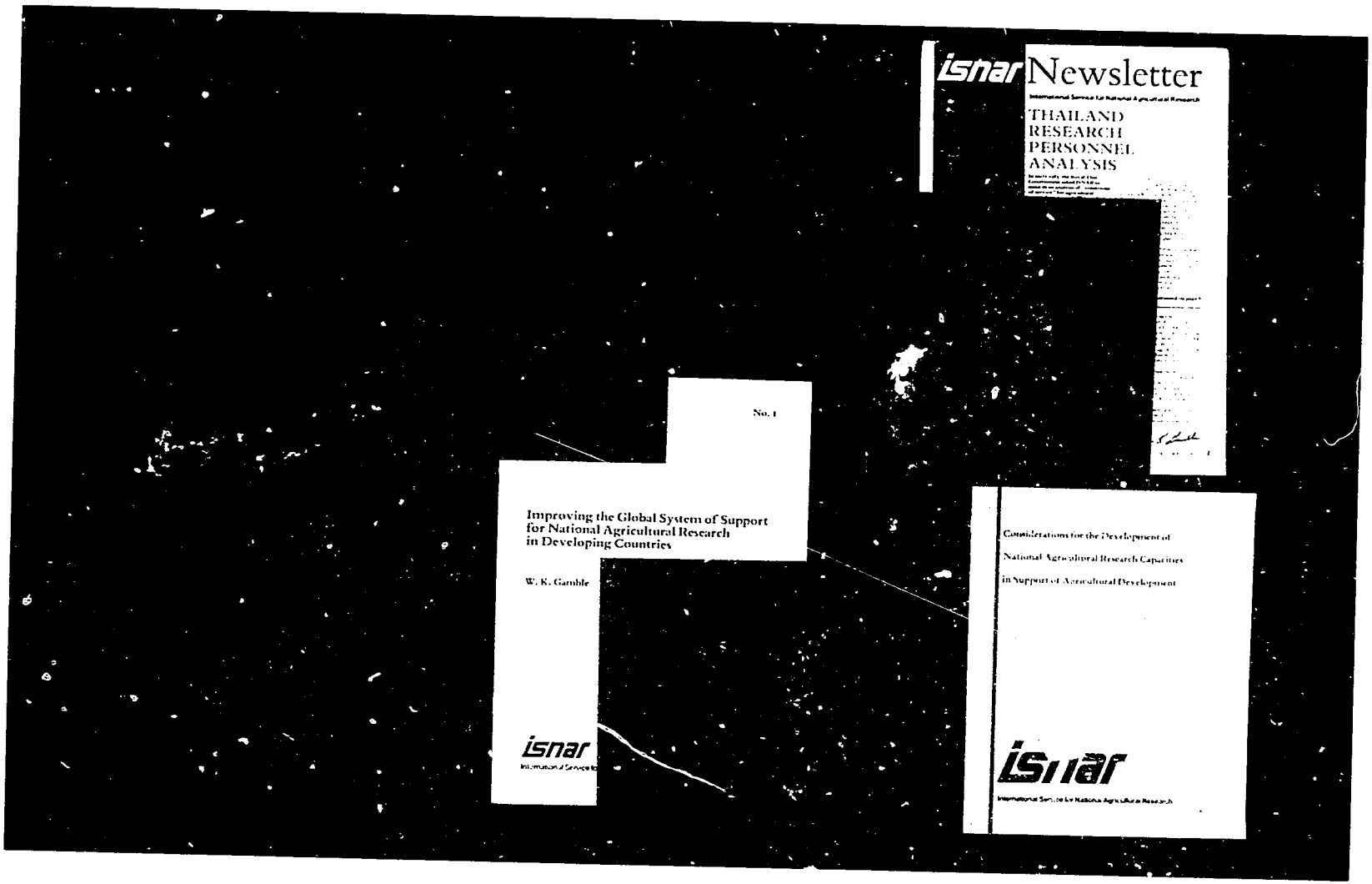
Generates increased resources
A compelling reason for increased special project activity is to increase ISNAR's resources and capacity to respond to growing demands for its services. The core budget may not grow sufficiently during the next few years. Therefore, if ISNAR is to expand its programs, additional financial support from special projects is necessary.
Special projects, however, must fit within ISNAR's policy framework. Only special projects which are entirely compatible with ISNAR's mandate will be accepted and carried out. They must augment and strengthen ISNAR's endeavors and thrust.

Trend of special project and core budgets

Year	Special projects	Core budget	Percent from special projects
	($ 000)	($ 000)	
1982	59	2,253	2.6
1983	318	3,318	9.6
1984	740	3,770	19.6

The table shows approximate year-to-year expenditures from special project funds as compared to expenditure from ISNAR's core budget. As can be seen, the percentage of funds from special projects is rising.

1984 Staff participation, publications, and consultants



1984 Participation by staff

January 20. International Course in Food Science and Nutrition. Netherlands Universities Foundation for International Cooperation (NUFFIC). Wageningen, Netherlands. Lectures by Dr. Byron Mook.

February 6. Inauguration of Third ICRA Course. Wageningen, Netherlands. Opening address by Dr. W.K. Gamble.

February 15. International Course in Food Science and Nutrition. Netherlands Universities Foundation for International Cooperation (NUFFIC). Wageningen, Netherlands. Lectures by Dr. Byron Mook.

February 12-18. Advancing Agricultural Production in Africa. Commonwealth Agricultural Bureau's First Scientific Conference. Arusha, Tanzania. Rapporteur on Natural Resources Management Symposium, Dr. Matthew Dagg.

February 17-19. USAID Agricultural Officers North Africa Middle East Meeting. Cyprus. Presentation by Dr. W.K. Gamble.

March 2. International Course for Development Oriented Research in Agriculture. International Agriculture Center, Wageningen, Netherlands. Lecture by Dr. H.K. Jain.

March 2-3. Workshop on Agricultural Research to Benefit Poor Rural People in Developing Countries. University of East Anglia, Norwich, England. Discussant: Dr. Matthew Dagg.

March 12-16. TAC Meeting. Rome, Italy. Dr. W.K. Gamble, Chairman of Center Directors.

March 15-16. International Fund for Agricultural Development (IFAD), Rome, Italy. Dr. Carlos Valverde and Dr. W.K. Gamble.

March 23-24. Meeting at GTZ headquarters on possible funding to REDINAA from the EEC research funds, Frankfurt, Germany. Dr. Carlos Valverde.

March 24-29. Pakistan Agricultural Research Centre Complex. Panel Discussion of Economic Consequences of Investment in Agricultural Research. Near Islamabad, Pakistan. Panel Member, Dr. Floyd Williams.

March 25-April 8. External review of CSIRO Tropical Crops and Pastures Research Institute. Australia. Review team member, Dr. W.K. Gamble.

March 28-30. International Course on Rural Research and Rural Policy. Institute of Development Studies, University of Sussex. Brighton, United Kingdom. Lectures by Dr. Bryon Mook.

March 29-30. IFARD Officers Meeting. The Hague, Netherlands. Dr. W.K. Gamble.

March 31-April 17. Mexico, Guatemala, Costa Rica, Panama. Review and analysis mission of the regional cooperative potato program (PRECODEPA) in Central America. Dr. Carlos Valverde.

April 8-19. Agricultural Research Policy Seminar. University of Minnesota, Minneapolis, U.S.A. Presented Paper "Critical Considerations for the Development of National Agricultural Research Capacities." Dr. Eduardo Trigo. Case studies by Mr. S. Huntington Hobbs.

April 15-19. Workshop on the Improvement of Collaboration between the National Agricultural Research Organizations in the Region, ICARDA and GTZ projects. Aleppo, Syria. Presentation by Dr. G. Hariri.

April 16-27. World Bank Agricultural Research Project Appraisal Mission to Rwanda. Member of mission (April 16-20), Dr. Rudolph B. Contant.

April 20-May 12. External Review, Asian Vegetable Research and Development Center. Shanhua, Taiwan. Participant, Dr. T. Ajibola Taylor.

April 22-28. Fifth General Conference, Association of Faculties of Agriculture in Africa (AFAA). Ezulwini, Swaziland. ISNAR delegate: Dr. Rudolf B. Contant (AFAA Gold Medal 1984). Paper: "Linking Agricultural Research and Higher Agricultural Education: A Partnership for Success." Dr. R.B. Contant.

April 24-25. Master of Business Administration Program at Babcock Graduate School of Business, Wake Forest University, U.S.A. Lecture on role of private sector in agricultural development and case study presentation by Mr. S. Huntington Hobbs as Guest Professor.

April 26. Planning for Tomorrow's Agriculture: Greater Productivity, Efficiency, and Diversity. Inter-Center Seminar on IARCs and Biotechnology, IRRI. Los Baños, Philippines. Lecture by Dr. H.K. Jain.

May 20-26. Review of National Agricultural Research and Extension Programs – Present and Future. Kariba, Zimbabwe. Presentation on the implications of multidisciplinary research in NARS by Dr. T. Ajibola Taylor.

May 23-25. Consultative Group Meeting. Rome, Italy. Report by Dr. W.K. Gamble, Chairman of Center Directors.

May 28-June 1. Fourth Technical Consultation of AGRIS Participating Centers, FAO. Rome, Italy. Observer, Mr. Peter Thorpe.

May 30. Agricultural Research Management Course, Overseas Development Group. University of East Anglia, Norwich, England. Lecture on human resource planning by Dr. P. Bennell.

June 7. Fiji Agricultural Society. Scientific Basis for Transformation of Traditional Agriculture. Suva, Fiji. Lecture by Dr. H.K. Jain.

June 10-21. Presentation to the Cameroonian Ministry of Higher Education and Scientific Research (MESRES) of the ISNAR-PAID/CA study report "Improvement of Agricultural Research Management in Cameroon." ISNAR team: Dr. Rudolf B. Contant, Mr. Jean-Georges Doumbè-Moulongo and Ms. Marie de Lattre.

June 20-30. Center Directors TAC Meeting. Addis Ababa, Ethiopia. Dr. W.K. Gamble and Ms. Alicia Mina.

June 26-29. Annual Meeting of the Permanent Regional Committee (COPERE) of the Regional Cooperative Potato Program (PRECODEPA). Santo Domingo, Dominican Republic. Presentation by Dr. Carlos Valverde.

July 21-28. USAID/Cameroon Agricultural Education Workshop. Yaounde, Cameroon. Participant, Dr. T. Ajibola Taylor.

July 27. Course in Vegetable Production. International Agricultural Center, Wageningen, Netherlands. Lecture by Dr. H.K. Jain.

August 4-9. Meeting with the Arab Organization for Agricultural Development (AOAD) to discuss the draft agreement of collaboration between AOAD and ISNAR. Khartoum, Sudan. Dr. W.K. Gamble and Dr. G. Hariri.

August 7-17. Program and Budget Preparation for 1985, Rwandan Institute of Agricultural Sciences (ISAR). Rubona, Rwanda. Invited as program review person, Dr. Rudolf B. Contant.

August 9-14. Workshop to Identify Common Research Interests with U.S. Universities. CIMMYT, Mexico. Participant, Dr. Floyd Williams.

August 20-25. XVII International Congress of Entomology, Hamburg, West Germany. Participant, Dr. T. Ajibola Taylor.

August 20-30. Seminar on Research Management in Aquaculture, Szarvas, Hungary. Dr. W.K. Gamble and Dr. Paul Bennell.

August 24. Symposium on 25 Years of Soil Tillage Research. Agricultural University, Wageningen, Netherlands. Presentation "Aspects of Soil Tillage in the Agricultural Development in the West African Savanna Zone", by Dr. W.A. Stoop.

August 27-29. Internal Workshop of Agricultural Research Centers on Selected Economic Research Issues in Latin America. CIAT, Cali, Colombia. Dr. Eduardo Trigo.

September 5-7. Agricultural Technology Management, USAID Agricultural Sector Council Workshop. Washington, D.C., U.S.A. Dr. Howard Elliott.

September 6-7. IFARD-Latin America and Caribbean Meeting; and CIMMYT/BID Seminar on "Strategies for Strengthening Agricultural Research in Latin America and the Caribbean". CIMMYT, Mexico. Dr. Carlos Valverde.

September 12-14. Workshop on Agricultural Research Policy and Organization in Small Countries. Wageningen, Netherlands. Paper presented by Dr. W.K. Gamble. Participant, Dr. Eduardo Trigo.

September 16-20. Symposium on "Integrated Pest Management and Rationalization of Pesticide Use in the Arab World." AOAD, Algiers, Algeria. Presentation by Dr. G. Hariri.

September 17-22. Workshop on Sorghum and Millet Farming Systems Research in Latin America. INTSORMIL-CIMMYT-ICRISAT. El Batan, Mexico. Keynote paper: "Interdisciplinary and Intercommodity Aspects in the Organization of Farming Systems Research Programs," by Dr. W.A. Stoop.

September 18-21. Annual Conference, Development Studies Association. Bradford University, Bradford, England. Dr. Paul Bennell.

September 24-October 6. First Agricultural Research Management Seminar in Cameroon, organized jointly by the Ministry of Higher Education and Scientific Research (MESRES) and ISNAR. Nkolbisson, Cameroon. ISNAR team: Dr. Rudolf B. Contant, Mr. Jean-Georges Doumbè-Moulongo, and Ms. Marie de Lattre.

October 1-3. Workshop on Research Program Evaluation. Bangladesh Agricultural Research Council, Dhaka, Bangladesh. Presentations by Dr. H.K. Jain, Dr. J. Murphy, Dr. B. Mook.

October 7-10. Workshop on Potentials for Strengthening Management in National Agricultural Research. Amman, Jordan. Presentations by Drs. W.K. Gamble and Byron Mook; Mr. Alan Fletcher and Dr. G. Hariri.

October 15. IIE Board of Trustees. New York, U.S.A. Presentation by Dr. W.K. Gamble.

October 18-20. Inter-Center Consultation on Farming Systems Research in Eastern and Southern Africa. ILRAD-CIMMYT, Nairobi, Kenya. Dr. W.A. Stoop.

October 22-23. Task Force Meeting for forthcoming First General Conference of the Association of Agricultural Research Institutions in the Near East and North Africa. FAO/ICARDA/ISNAR. Rome, Italy. Participation, Dr. G. Hariri.

October 23. Official visit to the Department of Agriculture, Health and Rural Development of the German Agency for Technical Cooperation (GTZ), Eschborn, Germany. ISNAR delegation: Dr. W.K. Gamble, Dr. Rudolf B. Contant, Dr. H. Krishan Jain, and Dr. Eduardo Trigo.

October 30-November 9. Center Directors and TAC Meeting, and Meeting of the CGIAR "Centers Week." Washington, D.C., U.S.A. Dr. W.K. Gamble, Ms. Alicia Mina, Dr. Rudolf Contant, Dr. Eduardo Trigo, and Ms. Louise Ogden.

October 31-November 1. Presentation to staff members of the Swiss Development Cooperation (SDC) on the conclusions and recommendations of the PRECODEPA review mission report which was prepared and edited at ISNAR. Bern, Switzerland. Dr. C. Valverde.

November 8. Roundtable on Women and Agricultural Technology. Washington, D.C., U.S.A. Dr. J. Murphy.

November 14-15. Workshop on Text Retrieval. Institute of Information Scientists, London, England. Participation, Mr. Peter Thorpe.

November 15. ICRA Board Meeting. Wageningen, Netherlands. Dr. W.K. Gamble.

November 24-27. "First Conference on Applied Agricultural Research" organized by the Iraqi State Board for Applied Agricultural Research (SBAAR). Baghdad, Iraq. Presentation by Dr. G. Hariri.

November 24-27. "Modern Scientific Administration for Scientific Research Institutes." Workshop organized by the Federation of Arab Scientific Research Councils (FASRC). Baghdad, Iraq. Presentation by Dr. G. Hariri.

November 29-30. "Seminario Taller sobre la Creacion del Instituto Dominicano de Investigaciones Agropecuarias (IDIA)." Santiago, Dominican Republic. Participation by Dr. Eduardo Trigo.

December 3-6. Workshop on "The Establishment of a Caribbean Cooperative Agricultural Research Network." Sponsored by the UNDP and ECLA. Kingston, Jamaica. Dr. Carlos Valverde.

1984 Publications

First Congress of the African Chapter of the International Federation of Agricultural Research Systems for Development (IFARD).

List of ISNAR Publications.

Premier Congrès du Chapitre Africain de la Fédération Internationale des Systèmes de Recherche Agricole pour le Développement (FISRAD-IFARD).

La Recherche Agronomique et Zootechnique en Haute Volta.

Improvement of Agricultural Research Management in Cameroon.

ISNAR in the Eighties.

Quelques Exigences Critiques pour une Recherche Agricole Productive, A.T. Mosher.

Profiles: the Professional Staff of ISNAR.

ISNAR dans les Années 1980.

ISNAR Brochure. Spanish.

ISNAR Brochure. Arabic.

ISNAR Annual Report 1983.

ISNAR Rapport Annuel 1983.

Guidelines for ISNAR Reviews and Evaluations.

Issues in Organization and Management of Research with a Farming Systems Perspective Aimed at Technology Generation.

L'Institut National de la Recherche Agronomique du Maroc.
Vol. 1 – Bilan et Perspectives.
Vol. 2 – Annexes.

Program and Budget for 1985.

L'Amélioration de la Gestion de la Recherche Agricole au Cameroun.

ISNAR/EDI Colloquium on Training Needs in National Agricultural Research Planning and Management.

ISNAR en la década de 1980.

Considerations for the Development of National Agricultural Research Capacities in Support of Agricultural Development.

ISNAR Newsletter No. 1.

Improving the Global System of Support for National Agricultural Research in Developing Countries. Reprint No. 1.

1984 Consultants to ISNAR

Mr. Kenneth R.M. Anthony
Preparation of the proposal for improving liaison between IARCs and national agricultural research programs in the SADCC region.
Oxted, Surrey, England

Dr. Pierre Antoine
Member of team on the ISNAR mission to Morocco.
IADS
Arlington, Virginia, U.S.A.

Dr. Robert Ayling
Member of the team to study management training needs in African agricultural research in Sudan.
U.S. Department of Agriculture
Washington, D.C., U.S.A.

Dr. Pote Boonruang
Conducted interviews of about 150 graduate members of staff of the Department of Agriculture to establish precisely what work they do and at what level.
Kasetsart University
Bangkok, Thailand

Dr. Joseph Casas
Member of the team on the ISNAR mission to Morocco.
INRA
Montpellier, France

Dr. Wayne Clyma
Member of the team on the ISNAR mission to Somalia.
Colorado State University
Fort Collins, Colorado, U.S.A.

Mr. Robert Cowell
Reorganized ISNAR's mailing list.
University of Wisconsin
Madison, Wisconsin, U.S.A.

Dr. Guy Fauconneau
Requested by INTA of Argentina to advise on specialized research institutes.
INRA
Paris, France

Dr. Edward Felton
Instructor in management training course at Mananga Agricultural Management Centre in Swaziland.
Wake Forest University, North Carolina, U.S.A.

Ir. Jan de Graaf
Member of the team on the ISNAR review mission to Kenya.
Royal Tropical Institute
Amsterdam, Netherlands

Mr. Sam T. Harmon
Instructor in the management training course at Mananga Agricultural Management Centre in Swaziland.
International University – Africa
Nairobi, Kenya

Dr. Fred Haworth
Assisted in the preparation of research plans for Fiji and worked on position descriptions for the Thailand Department of Agriculture.
Kingsbridge, England

Dr. John Holtzman
Member of the team on the ISNAR review mission to Somalia.
USAID, S&T/RD/RI
Washington, D.C., U.S.A.

Dr. Don Humpal
Team member on the ISNAR review mission to Somalia.
Development Alternatives, Inc.
Washington, D.C., U.S.A.

Dr. Dayanatha Jha
Team member on the ISNAR review mission to Kenya.
IFPRI
Washington, D.C., U.S.A.

Ms. Hazel Kellar
Prepared plan for ISNAR central filing system.
Arizona, U.S.A.

Dr. K. Robert Kern
Worked in Papua New Guinea on follow-up to the ISNAR review and planning mission.
Iowa, U.S.A.

Dr. François Labouesse
Team member on the ISNAR review mission to Morocco.
Montpellier, France

Dr. Francis LeBeau
Team member on the ISNAR mission and follow-up missions to Zaire.
Missouri, U.S.A.

Dr. J.K. Leslie
Team member on the ISNAR review mission to Kenya.
Queensland Department of Primary Industries
Queensland, Australia

Ms. Ada Florentino de Llinás
Acted as advisor to Executive Secretary of National Agricultural Council in support of its responsibility for implementing the "Instituto Dominicano de Investigaciones Agrarias (IDIA)".
Santo Domingo, Dominican Republic

Dr. A.V.J. Martin
Assisted Communications Department on editorial responsibility for French language materials.
Oegstgeest, Netherlands

Dr. Edgardo Moscardi
Member of the follow-up work in Dominican Republic.
Buenos Aires, Argentina

Dr. Barry Nestel
Continue collaboration with AARD of Indonesia as a follow-up to the ISNAR review mission.
Participated in the IADS/ISNAR workshop in Bangladesh.
Redhill, Surrey, England

Dr. Ernie W. Nunn
Team member on ISNAR review mission to Kenya.
ICRISAT/USAID
Harare, Zimbabwe

Dr. B.I. Osborn
Team member on ISNAR review mission to Somalia.
University of California
Davis, California, U.S.A.

Dr. Philip G. Pardey
Worked on development of a research proposal on assessing the productivity of agricultural research systems in the developing world.
St. Paul, Minnesota, U.S.A.

Dr. William J.A. Payne
Team member on the ISNAR review mission to Kenya.
London, England

Dr. William Pritchard
Team member on the ISNAR mission to Somalia.
University of California
Davis, California, U.S.A.

Dr. N.S. Randhawa
Team member on ISNAR review mission to Kenya.
Indian Council of Agricultural Research
New Delhi, India

Dr. Guy Richard
Instructor in seminar held by ISNAR in Cameroon on various aspects of research management.
Chantilly, France

Dr. Vernon Ruttan
Participated in follow-up on previous discussions with officials of the Instituto Colombiano Agropecuario.
University of Minnesota
St. Paul, Minnesota, U.S.A.

Mr. Stephen Sandford
Team member on ISNAR follow-up mission to Somalia.
ILCA
Addis Ababa, Ethiopia

Ms. Kathleen Sheridan
Assisted Publications Officer in editing and writing of several documents.
University of Georgia
Athens, Georgia, U.S.A.

Mr. Wayne E. Swegle
Worked with Communications Officer on the preparation of the 1983 Annual Report.
Des Moines, Iowa, U.S.A.

Mr. Geoffrey Tansey
Synthesized ISNAR mission reports and prepared country profiles.
West Yorkshire, England

Dr. Jean Pierre Trouchaud
Team member on the ISNAR review mission to Morocco.
Montpellier, France

Mr. Guy Vallaeys
Team member on the ISNAR review mission to Zaire.
IRAT
Cesson, France

Dr. E.W.M. Verheij
Team member on the ISNAR review mission to Kenya.
Agricultural University
Wageningen, Netherlands

Mr. R.T. Wilson
Team member on the ISNAR follow-up mission to Somalia.
ILCA
Addis Ababa, Ethiopia

Dr. Dirk Zoebl
Team member on the ISNAR review mission to Kenya.
Thika, Kenya

ISNAR's 1984 financial report

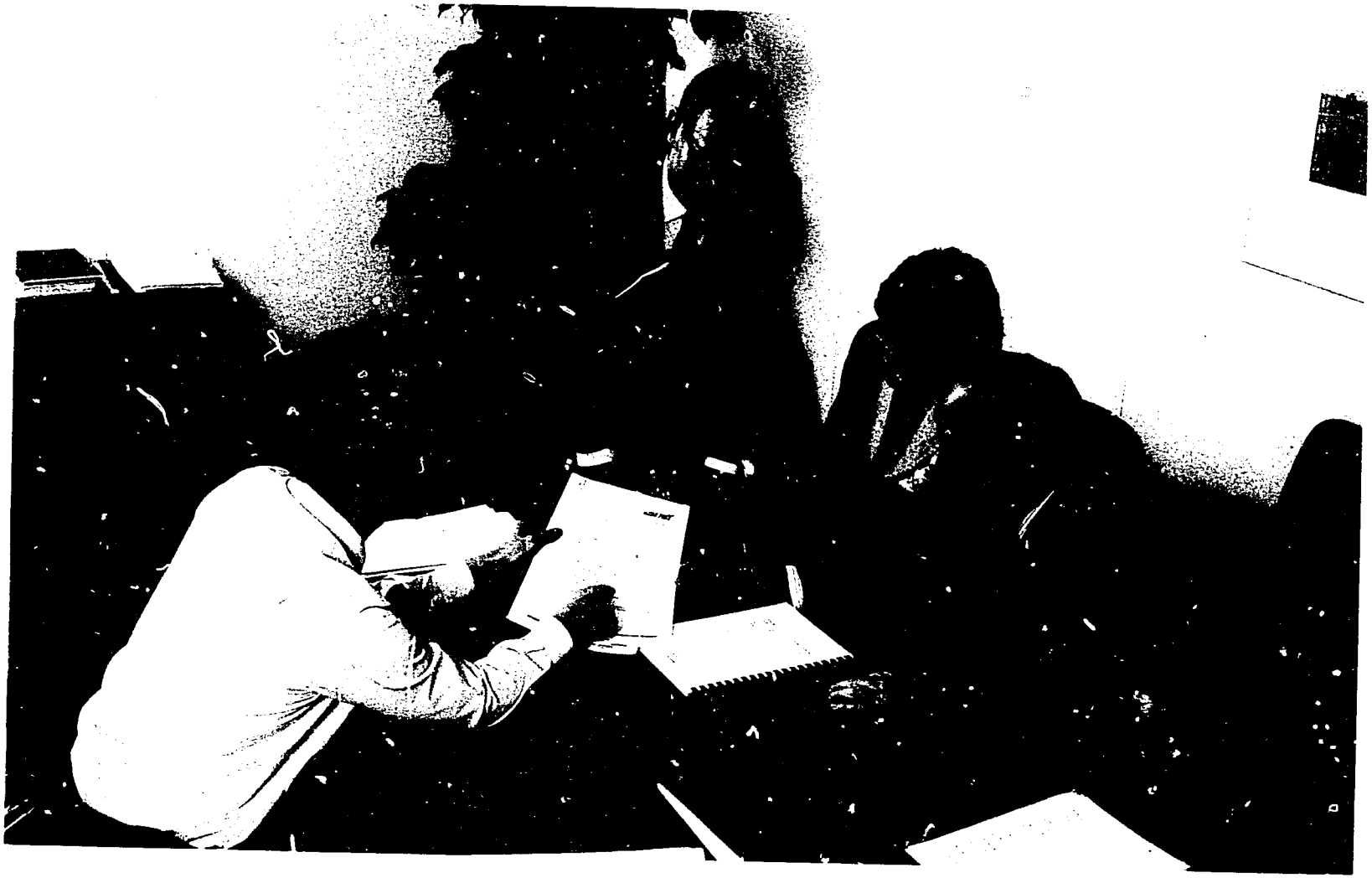


TABLE OF CONTENTS

Auditor's Report	Page	87
Balance Sheet		88
Receivables from Donors		89
Statement of Sources and Application of Funds		90
Funds Provided and Costs		91
Schedule of Earned Income		92
Comparative Statement of Actual Expenses and Approved Budget		93
Notes to the Accounts		94-95

Price Waterhouse Nederland

POSTBUS 30439
2500 GK 'S-GRAVENHAGE (THE HAGUE)
KONINGINNEGRACHT 8
2514 AA 'S-GRAVENHAGE (THE HAGUE)

AUDITORS REPORT

We have examined the accompanying accounts for the year to December 31, 1984 of the International Service for National Agricultural Research (ISNAR).

Based on our examination, we are of the opinion that these accounts have been properly prepared using accounting principles consistent with those used in the preceding year to give the information required to be shown in accordance with the accounting procedures contained in the instructions issued by the Consultative Group on International Agricultural Research, Washington.

Price Waterhouse Nederland

March 15, 1985

BALANCE SHEET AT DECEMBER 31, 1984
(STATED IN US DOLLARS)

	Notes*	1984	1983
Current Assets			
Cash		516,096	391,266
Receivables from Donors		163,492	28,914
Other Receivables		137,187	105,673
Prepayments		80,967	74,294
Total Current Assets		897,742	600,147
Fixed Assets	2		
Vehicles		23,234	23,234
Furnishings and Office Equipment		651,777	620,777
Total Fixed Assets		675,011	644,011
TOTAL ASSETS		$1,572,753	$1,244,158

	Notes*	1984	1983
Liabilities			
Advance received on 1985 Core donation		318,004	—o—
Accrued Expenses	3	285,475	252,110
Total Liabilities		603,479	252,110
Fund Balances			
Invested in Fixed Assets		675,011	644,011
Unexpended Funds:			
Core-Unrestricted		(29,696)	(3,438)
Working Fund	4	310,000	310,000
Special Projects	7	13,959	41,475
Total Fund Balances		969,274	992,048
TOTAL LIABILITIES AND CAPITAL		$1,572,753	$1,244,158

* see page 94

RECEIVABLES FROM DONORS AS AT DECEMBER 31, 1984
(STATED IN US DOLLARS)

Donor	Amount Pledged in Original Currency	US$ Equivalent at time of Pledge	Payment in Original Currency	Received During the Year	Losses/Gains Arising on Exchange and/or Donation Shortfall	Balance Outstanding at the Year End
CORE UNRESTRICTED OPERATING GRANTS						
Australia	AusS 84,000	75,360	AusS 84,000	78,630	(3,270)	—o—
Canada	CanS 225,000	180,145	CanS 100,000	80,888	5,376	93,881
E.E.C.	ECU 150,000	121,240	ECU 150,000	110,824	10,416	—o—
Federal Rep. of Germany	DM 200,000	71,790	DM 200,000	72,939	(1,149)	—o—
Ford Foundation	US$ 75,000	75,000	US$ 75,000	75,000	—o—	—o—
France	FF 850,000	99,765	FF 425,000	46,623	9,915	43,227
IBRD	US$ 890,004	890,004	US$ 890,004	890,004	—o—	—o—
Ireland	IrPds 65,000	76,993	IrPds 65,000	76,993	—o—	—o—
Italy	L 300 million	181,488	L 300 million	157,784	23,704	—o—
Netherlands	Dfl 600,000	192,000	Dfl 600,000	189,136	2,864	—o—
Philippines	US$ 50,000	50,000	US$ 20,790	20,790	27,826	1,384
Spain	US$ 25,000	25,000	—o—	—o—	—o—	25,000
Sweden	SKr 100,000	12,290	SKr 100,000	12,549	(259)	—o—
Switzerland	SwF 370,000	165,735	SwF 370,000	163,092	2,643	—o—
UK	PdsSt 120,000	170,090	PdsSt 120,000	162,845	7,245	—o—
USAID	US$ 900,000	900,000	US$ 900,000	900,000	—o—	—o—
		$ 3,286,900		$ 3,038,097	$ 85,311	$ 163,492
Australia additional funds received	US$ 2,753	$ 2,753	US$ 2,753	$ 2,753	$ —o—	$ —o—
Total Core Unrestricted Operating Grants in 1984		$ 3,289,653		$ 3,040,850	$ 85,311	$ 163,492
Earned Income Applied in the Year		$ 21,174				
Over-Expenditure Prior Year		$ (3,438)				
Revised 1984 Budget		$ 3,307,389				

STATEMENT OF SOURCES AND APPLICATION OF FUNDS
FOR THE YEAR ENDED DECEMBER 31, 1984
(STATED IN US DOLLARS)

Source of Funds	1984	1983
1.- Core Operations		
Unrestricted	3,289,653	3,016,540
Unexpended balance from prior year	(3,438)	199,940
Earned Income Applied in Year	21,174	100,428
	3,307,389	3,316,908
2.- Capital		
Unrestricted	---o---	---o---
Unexpended balance from prior year	---o---	---o---
Working Fund	310,000	310,000
Earned Income Applied in Year	31,000	67,000
	341,000	377,000
3.- Special Projects - Cumulative		
Income on Projects not Completed	948,636	440,159
TOTAL FUNDS	$ 4,597,025	$ 4,134,067

Application of Funds	1984	1983
1.- Core Operations - Unrestricted		
Review and Planning NARS	1,335,207	1,371,168
Research Studies	312,028	372,924
Conferences and Training	264,208	368,154
Information Services	402,427	294,340
General Administration	486,460	379,937
General Operating Costs	536,755	533,823
	$ 3,337,085	$ 3,320,346
2.- Capital		
Capital Additions	31,000	67,000
3.- Special Projects - Cumulative		
Expenditure on Projects not Completed	934,677	398,68
4.- Unexpended Balance		
Core - Unrestricted	(29,696)	(3,438
Working Fund	310,000	310,00
Special Projects	13,959	41,47
	294,263	348,03
TOTAL APPLICATION OF FUNDS	$ 4,597,025	$ 4,134,0

FUNDS PROVIDED AND COSTS
FOR THE YEAR ENDED DECEMBER 31, 1984
(STATED IN US DOLLARS)

	Funds Available	Fixed Assets	Review & Planning NARS	Research Studies	Conferences and Training	Information Services	General Admin.	General Operating Costs	Total	Transfer to Unexpended Balance
Unrestricted Core	3,307,389	---o---	1,335,207	312,028	264,208	402,427	486,460	536,755	3,337,085	(29,696)
Capital Grants	31,000	31,000	---o---	---o---	---o---	---o---	---o---	---o---	31,000	---o---
Working Fund	310,000	---o---	---o---	---o---	---o---	---o---	---o---	---o---	---o---	310,000
Special Projects	948,636	---o---	934,677	---o---	---o---	---o---	---o---	---o---	934,677	13,959
TOTAL GRANTS & EXPENSES	$4,597,025	$ 31,000	$2,269,884	$ 312,028	$ 264,208	$ 402,427	$ 486,460	$ 536,755	$4,302,762	$ 294,263

SCHEDULE OF EARNED INCOME
FOR THE YEAR ENDED DECEMBER 31, 1984
(STATED IN US DOLLARS)

	1984	1983
Source of Earned Income		
Bank Interest	24,505	60,663
Reimbursement for staff services rendered	31,731	—o—
Income Arising on Special Projects Completed	(4,062)	106,765
	$ 52,174	$167,428
Application of Earned Income		
Applied to Core Operations	21,174	100,428
Applied to Capital	31,000	67,000
	$ 52,174	$167,428

COMPARATIVE STATEMENT OF ACTUAL EXPENSES AND APPROVED BUDGET
FOR THE YEAR ENDED DECEMBER 31, 1984
(STATED IN US DOLLARS)

Programs	Core Unrestricted Budget	Core Unrestricted Actual	Capital Budget	Capital Actual
Review and Planning NARS	1,452,800	1,335,207		
Research Studies	330,650	312,028		
Conferences and Training	439,000	264,208		
Information Services	355,400	402,427		
General Administration	446,650	486,460		
General Operating Costs	530,500	536,755		
Approved Budget	$3,555,000	$3,337,085		
Budget Shortfall	$ 247,611			
Revised Budget	$3,307,389	$3,337,085		
Unexpended Balance-Deficit	$ (29, 696)			
Capital				
Fixed Assets			31,000	31,000
Working Fund			310,000	310,000
			$341,000	$341,000

NOTES TO THE ACCOUNTS
DECEMBER 31, 1984

1.- Basis of Financial Statements

Balances in Dutch Guilders have been translated to US Dollars at the rate of exchange ruling at the balance sheet date – DFL 3,40 = US$1 (1983 – DFL 3.05 = US$1).

2.- Fixed Assets

Fixed assets are stated at cost with no charge for depreciation.

3.- Accrued Expenses

Commitments made up to 15 December, 1984 and remaining unexecuted as of the Balance Sheet date, have been accrued for.

4.- Working Fund

This represents approximately 30 days average operating cost requirement based on the 1984 budget.

5.- Retirement Fund

ISNAR contributes to a pension fund for all staff for which all vested benefits are fully paid annually.

6.- Office Rent

There is a rent increment each year based on the CBS cost of living index of the Netherlands. ISNAR has the option to sub-let if it should terminate or transfer from The Hague. Approval was given in December, 1984 by the Executive Committee of the Board of Trustees to rent the second floor in ISNAR's building to accommodate future expansion.

7.- Special Projects

Special Projects are those funded outside the core budget and are accounted for on completion and not on a calendar year basis. The net balance of ($4,062) on projects completed during 1984 has been deducted from Earned Income. The balance on projects not completed at the balance sheet date is included in Unexpended Funded balances.

Special Project movements for the year can be summarized as follows:

	Cumulative Income	Cumulative Expenditure	Net Balance
Balance January 1	440,159	398,685	41,474
Addition in the year	589,757	621,334	(31,577)
Projects Completed	(81,280)	(85,342)	4,062
Balance December 31	948,636	934,677	13,959

Funds received during the year comprise the following:

(i) $35,000 received from the U.S. Agency for International Development (Kenya) to provide support for a study of agricultural research system in Kenya and preparation of a comprehensive medium term national research strategy and program.

(ii) $64,697 received from Madagascar/IDA as initial payment on the contract for technical assistance in agricultural research management to be provided by ISNAR to the National Center for Research Applied to Rural Development "FOFIFA".

(iii) $48,024 received from the International Development Research Centre (IDRC) in further support of the agricultural research organization and performance program being carried out in Latin America with PROAGRO.

(iv) $19,000 received from The Rockefeller Foundation as first payment on their support for the seminar entitled "Inter-Center Seminar on Women and Agricultural Technology" to be held at the Bellagio Center in March, 1985.

(v) $59,085 received from Somalia/USAID to continue working with Somali research personnel to help define and plan the technical elements of an agricultural research capability development program.

(vi) $49,000 received from Zaire/USAID to assist the Government of Zaire to develop and promulgate directives for establishment of a sound agricultural research policy and institutional framework responsive to the agricultural sector needs of Zaire.

(vii) $49,610 received from Rwanda/IDA under the Contract between the Government of the Republic of Rwanda and ISNAR for advisory services in agricultural research management provided by ISNAR to the Rwanda Institute of Agricultural Sciences (ISAR).

(viii) $17,330 received from the United Nations Development Programme (UNDP) for the Study of the Integration of IARC Activity in Southern Africa.

(ix) $208,286 received from the U.S. Agency for International Development as continued support toward a field study on agricultural management, case writing, and workshops in Africa.

(x) $39,725 (PdsSt.30,000) received from the Overseas Development Administration of the United Kingdom as continued support toward a field study on agricultural management, case writing, and workshops in Africa.