

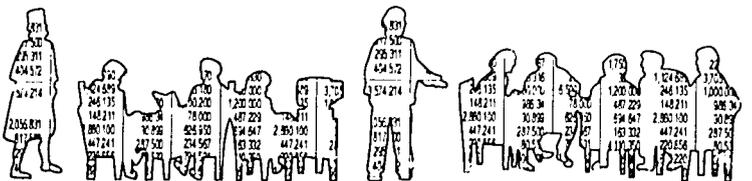
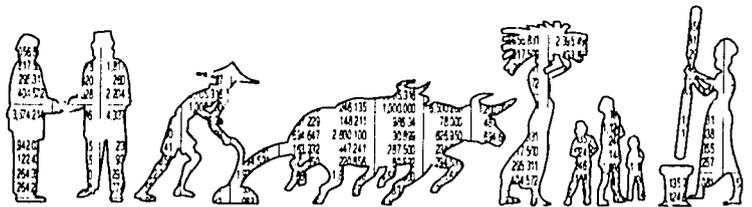
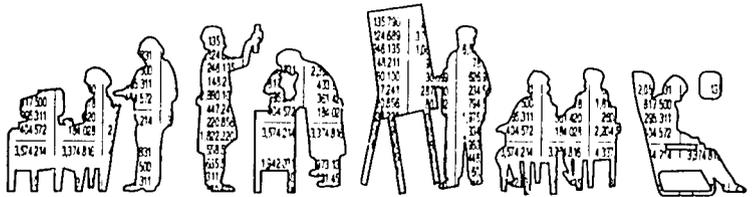
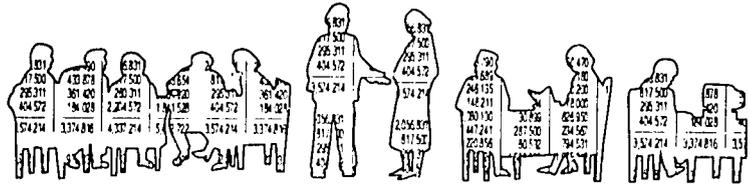
- PIF Accountants -

International Service for National Agricultural Research

# ISNAR Annual Report



## Theme essay: Accountability



The mandate of the International Service for National Agricultural Research (ISNAR) is to assist developing countries in bringing about lasting improvements in the performance of their national agricultural research systems and organizations. It does this by promoting appropriate agricultural research policies, sustainable research institutions, and improved research management. ISNAR's services to national research are ultimately intended to benefit producers and consumers in developing countries and to safeguard the natural environment for future generations.

ISNAR offers developing countries three types of service, supported by research and training:

- For a limited number of countries, ISNAR establishes long-term, comprehensive partnerships to support the development of sustainable national agricultural research systems and institutions.
- For a wider range of countries, ISNAR gives support for strengthening specific policy and management components within the research system or constituent entities.
- For all developing countries, as well as the international development community and other interested parties, ISNAR disseminates knowledge and information about national agricultural research.

ISNAR was established in 1979 by the Consultative Group on International Agricultural Research (CGIAR), on the basis of recommendations from an international task force. It began operating at its headquarters in The Hague, The Netherlands, on September 1, 1980.

ISNAR is a nonprofit autonomous institute, international in character, and apolitical in its management, staffing, and operations. It is financially supported by a number of the members of the CGIAR, an informal group of donors that includes countries, development banks, international organizations, and foundations. Of the 18 centers in the CGIAR system of international centers, ISNAR is the only one that focuses specifically on institutional development within national agricultural research systems.

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International Service for National Agricultural Research  
**ISNAR Annual Report**



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*Theme essay: Accountability*

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*May 1993*

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## Preface

*Some difficult issues faced both national and international agricultural research during the year. In many organizations funding was cut or remained stagnant. At the same time, there was a growing call for research to broaden its focus to include work on natural resource management and the environment. This is in addition to research in the more traditional areas related to productivity gains.*

*In June, concerns for the environment, natural resources, and development were clearly spelled out at the United Nations Conference on the Environment and Development (UNCED) in Rio de Janeiro. Even before the conference it had become clear that a more integrated strategy was needed to produce long-term solutions to agricultural production and resource conservation problems.*

*The "Agenda 21" strategy drafted at UNCED looks to the 21st century in an attempt to prepare the world for future challenges to sustainable development. For both the NARS and ISNAR it has set a broad yet clearly defined range of tasks, all aimed at fulfilling growing food production needs while protecting the environment for future generations. These challenge both national and international agricultural research. Without additional financial resources, agricultural research must become more efficient in operations and management and more discerning in prioritizing activities.*

*In recognition of these challenges, this year's annual report begins with a theme essay on accountability. In the coming years, agricultural research institutes will be called upon more and more often to demonstrate the scope and impact of their work. An important part of ISNAR's work in 1992 was the development or refinement of tools and approaches to help NARS meet this requirement.*

*In March, ISNAR's new strategy was formally put into place with its approval by the Board of Trustees. Highlights are provided on pages 20 and 21. These give an idea of the changes and choices that will influence ISNAR's future work. One of the strategy's most notable aspects is its widened definition of a NARS. NARS are now defined to include "all a country's entities responsible for organizing, coordinating, or executing research that contributes directly to the development of its agriculture and the maintenance of its natu-*

ral resource base." Here, agriculture is understood to cover crops, livestock, fish, and trees.

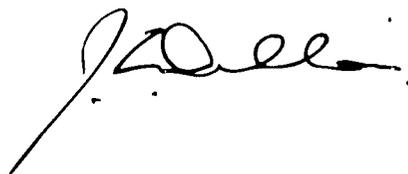
The revised strategy is complemented by ISNAR's new organizational structure, which was fully implemented in 1992. The institute's activities are now arranged into programs and services, each focused on a particular group of agricultural research policy or management components.

This annual report reviews the 1992 work of each of these program and service units individually. A later section provides details of ISNAR's collaboration with some 53 developing countries worldwide.

On behalf of ISNAR, its Board of Trustees, and its staff, we take pleasure in presenting the institute's annual report for 1992.



Christian Bonte-Friedheim  
*Director General*



John Dillon  
*Chairperson, Board of Trustees*

May 1993

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\* Completed service in 1992

\*\* Joined the Board in 1992

\*\*\* Joined the Board in 1992; deceased in March 1993

*Seated, left to right: Camus, Makhubu, Dillon, Rakotovo, Al-Shayji. Standing: Peter Ballantyne (secretary to the Board), Junguito, Bonte-Friedheim, Senécal, Ly, Peters, Berndt Müller-Hage (FAO observer), Wessels, Hemmi.*



## Acronyms

<b>AARD</b>	Agency for Agricultural Research and Development—Indonesia
<b>ACIAR</b>	Australian Centre for International Agricultural Research
<b>ADB</b>	Asian Development Bank
<b>AOAD</b>	Arab Organization for Agricultural Development
<b>ARC</b>	Agricultural Research Center—Egypt
<b>ARC</b>	Agricultural Research Corporation—Sudan
<b>AREA</b>	Agricultural Research and Extension Authority—Yemen
<b>ARETP</b>	Agricultural Research, Extension, and Training Project —Sudan/World Bank
<b>ARI</b>	Agricultural Research Institute—Lebanon
<b>AS</b>	Administrative Services (ISNAR)
<b>BIOTASK</b>	CGIAR's taskforce on biotechnology
<b>BARC</b>	Bangladesh Agricultural Research Council
<b>BAU</b>	Beijing Agricultural University—China
<b>CABI</b>	CAB International
<b>CAAS</b>	Chinese Academy of Agricultural Sciences
<b>CARDI</b>	Caribbean Agricultural Research and Development Institute
<b>CARICOM</b>	Caribbean Community
<b>CARP</b>	Council for Agricultural Research Policy—Sri Lanka
<b>CARP</b>	Centre for Agricultural Research Programming—Indonesia
<b>CEMARP</b>	Canada-Egypt-McGill Agricultural Response Program
<b>CGIAR</b>	Consultative Group on International Agricultural Research
<b>CIAD</b>	BAU Center for Integrated Agricultural Development—China
<b>CIAT</b>	Centro de Investigación Agrícola Tropical—Bolivia
<b>CID</b>	comprehensive institutional development
<b>CIDA</b>	Canadian International Development Agency
<b>CIFAP</b>	Center for International Food and Agricultural Policy, University of Minnesota—U.S.A.
<b>CILSS</b>	Comité Permanent Inter-Etats de Lutte contre la Sécheresse dans le Sahel
<b>CIMMYT</b>	International Maize and Wheat Improvement Center
<b>CIP</b>	International Potato Center

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<b>CIRAD</b>	Centre de Coopération Internationale en Recherche Agronomique pour le Développement—France
<b>CONITTA</b>	Comisión Nacional de Investigación y Transferencia de Tecnología --Costa Rica
<b>CSC</b>	Commonwealth Scientific Council
<b>CST</b>	Collaborative Services and Training (ISNAR)
<b>CTA</b>	Technical Centre for Agricultural and Rural Cooperation
<b>DASR</b>	Directorate of Agricultural and Scientific Research—Syria
<b>DSE</b>	Deutsche Stiftung für Internationale Entwicklung
<b>EAAP</b>	European Association for Animal Production
<b>EC</b>	European Community
<b>ECOWAS</b>	Economic Community of West African States
<b>EMBRAPA</b>	Empresa Brasileira de Pesquisa Agropecuária—Brazil
<b>ESAMI</b>	Eastern and Southern African Management Institute—Tanzania
<b>FAO</b>	Food and Agriculture Organization of the United Nations
<b>FONAIAP</b>	Fondo Nacional de Asistencia y Investigación Agropecuaria —Venezuela
<b>FRI</b>	Forestry Research Institute—Malaysia
<b>FSR</b>	farming systems research
<b>GDP</b>	gross domestic product
<b>GTZ</b>	Deutsche Gesellschaft für Technische Zusammenarbeit—Germany
<b>IARC</b>	international agricultural research center
<b>IBS</b>	Intermediary Biotechnology Service
<b>IBTA</b>	Instituto Boliviano de Tecnología Agropecuaria
<b>ICA</b>	Instituto Colombiano Agropecuario
<b>ICAR</b>	Indian Council of Agricultural Research
<b>ICARDA</b>	International Center for Agricultural Research in the Dry Areas
<b>ICIPE</b>	International Center of Insect Physiology and Ecology
<b>ICLARM</b>	International Center for Living Aquatic Resources Management
<b>ICRA</b>	International Centre for development oriented Research in Agriculture
<b>ICRISAT</b>	International Crops Research Institute for the Semi-Arid Tropics
<b>ICTA</b>	Instituto para la Ciencia y la Tecnología—Guatemala
<b>IDB</b>	Inter-American Development Bank
<b>IDRC</b>	International Development Research Centre—Canada
<b>IER</b>	Institut d'Economie Rurale—Mali

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<b>IFAP</b>	International Federation of Agricultural Producers
<b>IFAS</b>	Institute of Food and Agricultural Sciences, University of Florida —U.S.A.
<b>IGADD</b>	Inter-Governmental Authority on Drought and Development
<b>IICA</b>	Instituto Interamericano de Cooperación para la Agricultura
<b>IITA</b>	International Institute of Tropical Agriculture
<b>ILCA</b>	International Livestock Centre for Africa
<b>ILRAD</b>	International Laboratory for Research on Animal Diseases
<b>IMS</b>	Information Management Services (ISNAR)
<b>INERA</b>	Institut d'Etudes et de Recherches Agricoles—Burkina Faso
<b>INFORM</b>	Information for Agricultural Research Managers (ISNAR-developed management information system)
<b>INIA</b>	Instituto Nacional de Investigaciones Agropecuarias—Chile
<b>INIAP</b>	Instituto Nacional de Investigación Agropecuaria—Ecuador
<b>INIFAP</b>	Instituto Nacional de Investigaciones Forestales y Agropecuarias —Mexico
<b>INRA</b>	Institut National de la Recherche Agronomique—Morocco
<b>INRAN</b>	Institut National de Recherches Agronomiques du Niger
<b>INSAH</b>	Institut du Sahel
<b>INTA</b>	Instituto Nacional de Tecnología Agropecuaria—Argentina
<b>IRAG</b>	Institut de Recherche Agronomique de Guinée
<b>IRESA</b>	Institution de la Recherche et de l'Enseignement Supérieur Agricoles—Tunisia
<b>IRETA</b>	Institute for Research, Extension, and Training in Agriculture, University of the South Pacific—Western Samoa
<b>IRRI</b>	International Rice Research Institute
<b>IRZ</b>	Institut de Recherche Zootechnique—Cameroon
<b>ISABU</b>	Institut des Sciences Agronomiques du Burundi
<b>ISAR</b>	Institut des Sciences Agronomiques du Rwanda
<b>ISRA</b>	Institut Sénégalais de Recherches Agricoles
<b>KARI</b>	Kenya Agricultural Research Institute
<b>MARDI</b>	Malaysian Agricultural Research and Development Institute
<b>MIS</b>	management information system
<b>MOR</b>	Management of Organizations and Resources (ISNAR)
<b>NARO</b>	National Agricultural Research Organization—Uganda
<b>NARS</b>	national agricultural research system(s)

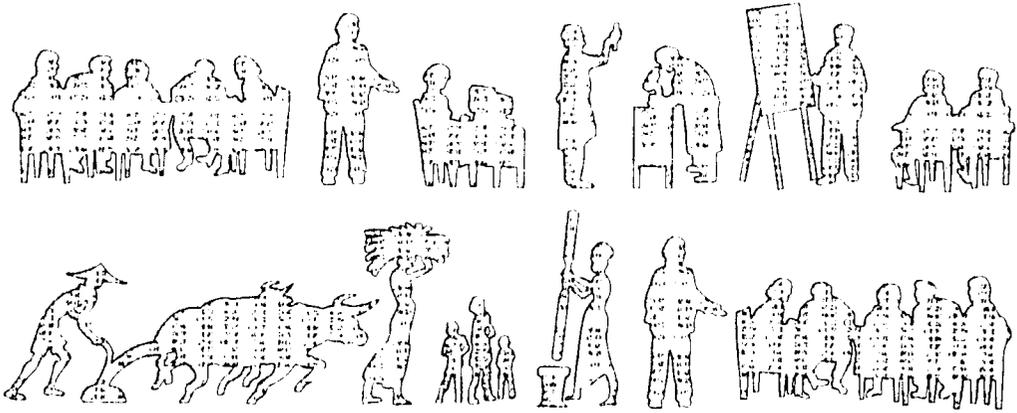
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<b>NATURA</b>	Network of European Agricultural Universities and Scientific Complexes
<b>NCARTT</b>	National Center for Agricultural Research and Technology Transfer—Jordan
<b>NCRI</b>	National Crop Research Institute—Ghana
<b>NCRTD</b>	National Center for Rural Technology Development (of the State Science and Technology Commission)—China
<b>ODA</b>	Overseas Development Administration—United Kingdom
<b>OFCOR</b>	on-farm client-oriented research
<b>PCARRD</b>	Philippine Council for Agriculture, Forestry and Natural Resources Research and Development
<b>PM&amp;E</b>	planning, monitoring, and evaluation
<b>PROCADI</b>	Programa Colombiano para el Avance de la Investigación
<b>PROCIANDINO</b>	Programa Cooperativo de Investigación y Transferencia de Tecnología Agropecuaria para la Subregión Andina
<b>PROCISUR</b>	Programa Cooperativo de Investigación Agrícola del Cono Sur
<b>PROINPA</b>	Proyecto de Investigación de la Papa—CIP/Bolivia
<b>RMC</b>	Research Management Center—the Philippines
<b>RNR</b>	renewable natural resources
<b>RPDM</b>	Research Program Design and Management (ISNAR)
<b>RPSS</b>	Research Policies and Systems Strategies (ISNAR)
<b>RTTL</b>	research-technology transfer linkages
<b>SADC</b>	Southern African Development Community
<b>SARMAC</b>	Strengthening Agricultural Research Management in Arab Countries—AOAD/ISNAR
<b>SIDA</b>	Swedish International Development Authority
<b>SIRI</b>	Sugar Industry Research Institute—Jamaica
<b>SPAAR</b>	Special Program for African Agricultural Research, World Bank
<b>SWRI</b>	Soil and Water Research Institute—Egypt
<b>UNDP</b>	United Nations Development Programme
<b>USAID</b>	United States Agency for International Development—U.S.A.
<b>WARDA</b>	West Africa Rice Development Association
<b>WINBAN</b>	Windward Islands Banana Growers' Association

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 Theme Essay
 

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### Accountability—An Issue Here to Stay

*The 1990s are seeing the continuation of a major shift in attitude toward publicly funded development assistance—a trend that began in the 1980s and promises to become permanent. The watchword of the decade is accountability. Whether agricultural research institutes like it or not, it is an issue now firmly imbedded in the agendas of donor and development agencies and, increasingly, of developing-country governments.*

**A**ccountability is a two-way obligation for national agricultural research institutions. First, research managers and scientists—the users of publicly provided development funds—must respond to the information needs and reporting requirements of the investors. Second, they must be accountable to farmers and consumers by asking their opinion, trying to meet their needs, and keeping them informed of research results.

Accountability, of course, is not a new issue. But for a number of reasons dis-

cussed below it has taken on new importance. Public pressure is mounting on the governments of richer countries to be more accountable for their development assistance expenditures, including support to agricultural research. The underlying question is simple: 'What have developing-country institutions done with the money?'

For their part, developing countries have often reacted to increased donor demands for accountability with disappointment and frustration. The counter-

question is equally simple: 'Why do the donors place so many difficult conditions on grants and loans if they are genuinely interested in our development?' For recipients these conditions often conflict with existing administrative procedures and even with national policy directions. In this context, the complex and multiple accountability requirements of donors are considered counterproductive. While recipients such as agricultural research institutes understand why donors have such requirements, they argue that fewer and simpler procedures would be more constructive.

The push for greater accountability produces a chain reaction. Donor countries, responding to public pressure, ask the international development agencies and recipient governments to justify the disbursement and use of funds. They ask for indicators of efficiency in resource use and for examples of research results. In turn, developing-country policymakers look to the senior managers of agricultural research institutions for information; and senior managers turn to program leaders and scientists. In this complicated game of accountability, the most prized quarry of all—and the most elusive—is proof of impact on farmers and consumers.

Developing-country governments, of course, are not only recipients of funds for development, they are also investors. They too put pressure on their own national institutions to become more accountable. They question overall levels of public expenditure as well as the balance between sectors including agriculture. They want their agricultural research institutions to use funds carefully and demonstrate results. Those that can de-

monstrate both their contribution to national development and their efficiency in doing so are more likely to secure a stable share of public funds.

### *Dissatisfaction, less money, more competition*

Three interrelated reasons for the growing importance of the accountability issue can be cited. First, there is widespread dissatisfaction among both donors and recipient governments with the slow pace of national development in agriculture and other sectors. Sub-Saharan Africa provides the most poignant example. In the seventies and first half of the eighties, agricultural growth in the region slowed to an annual average of 1.4%—half the rate of population growth. At the end of the 1980s, per capita food production in the region was lower than at the beginning of the decade, according to a World Bank report.<sup>1</sup>

The same document notes: "Africa's generally poor performance during the past 10 years has been reflected in weak growth in the productive sectors, poor export performance, mounting debt, deteriorating social conditions, environmental degradation and the increasing decay of institutional capacity." The danger here, the report goes on to say, "is that pessimism can be self-fulfilling: weak performance breeds disappointment, responsibility is shifted to others, inaction undermines self-confidence, and performance sinks even further. The process undermines the very basis on which to build growth and to develop African responsibility for Africa's destiny."

Despite huge investments in Third World development in recent decades,

<sup>1</sup> World Bank, 1989, *Sub-Saharan Africa: From Crisis to Sustainable Growth. A Long-Term Perspective Study*. Washington, DC: The World Bank.

then, the perception is that things are generally not getting better. Indeed, there is a crisis of confidence, with donors often blaming weak public-sector management and institutional breakdown for the poor performance. And in cases where the results of specific development investments have been clearly positive, there has often been a lack of information to that effect. That is, the good news, whether in Africa or elsewhere, has not necessarily been systematically fed back to investors.

A second reason for the push toward accountability is that a global economic downswing has resulted in a smaller funding base for development aid. This affects donor and recipient countries alike.<sup>2</sup> The development assistance budgets of the former, including contributions to agricultural research, are being cut. In its 1991 progress report on the world food and agricultural situation, FAO noted that, while developing countries continue to accord priority to agriculture, "external assistance (in real terms) ... declined for agricultural research, extension and training."

While data from the last few years are incomplete, information from specific donors corroborates this perception. For example, one national development agency that has traditionally been a significant contributor in this area spent one-third less on agricultural research projects in 1991 than it did in 1989. The downward trend is also evident in current funding levels for the international agricultural research centers of the CGIAR. And in the developing countries, external debt, low foreign exchange earnings, and the belt-tightening measures of structural adjust-

ment are forcing major cuts in public spending.

A third reason is the growing competition for development funds from new players and issues. As the geopolitical map of the world is redrawn, prospective new recipients are entering the scene. The breakup of the Soviet Union and the emergence of political pluralism there and elsewhere, for example, have placed additional demands on donor countries and development agencies. They are now asking: "Where should we invest our scarce funds?"

At the same time, new issues such as environmental degradation and natural resource management are being placed high on the global agenda. A blunt question is being put to agriculture and agricultural research in this context: "Are you part of the problem or part of the solution?"

The demand for agricultural research systems to become more accountable, both for the way funds are spent and for what is accomplished, is largely driven by donors and national governments. To date, very little pressure has come from farmers and consumers, the main users and ultimate beneficiaries of research results. Yet this is changing. In November 1991, the International Federation of Agricultural Producers, a worldwide umbrella group of national farmer organizations, expressed frustration over the lack of suitable technologies available from national research systems for use by African farmers. The federation indicated that its member organizations should consider bypassing them and go directly to international research centers for help. It went

2 The opening address to a 1992 conference organized by U.N. Secretary General Boutros Boutros-Ghali and former U.S. president Jimmy Carter was given by Uma Elele, the director of International Studies and Programs at the University of Florida, Gainesville, U.S.A. In her written address, she noted that for the first time since the Second World War, "investment rates measured as a share of GDP have dropped significantly in developing countries, most notably in Africa, but also in Latin America."

so far as to organize a meeting at an international research center to see what that center might have to offer.

The primary aim of publicly funded agricultural research is the well-being of farmers and consumers, many of whom are poor. Research, therefore, should also be accountable to them for the relevance

of the technologies it generates and for the ways in which funds are used. While in many countries these people are silent observers, the widespread trend to democratization is beginning to give them a much stronger voice. This will undoubtedly intensify the demand for accountability. National agricultural research institutions



### Accountability and planning for it

*A research institution, by stating up front how and when it intends to spend government and donor funds, gives itself, its investors, and other stakeholders a yardstick by which to measure performance. A clear statement of the direction and size of the national research effort—for example, in the form of a strategic plan for research linked to national development goals—instills confidence in investors*

*ISNAR has worked with the NARS of Mali to formulate such a national blueprint for agricultural research. Published in early 1992, the 12-year plan reflects a consensus among government officials and scientific leaders on Mali's agricultural research priorities. It was presented to donors and other stakeholders at a roundtable in October, organized in Bamako by the Malians and funded by FAO.*

*Above, Mali's minister of rural development and the environment (right) addresses donors at the meeting, calling on them to support implementation of the plan.*

must be prepared to explain and justify their actions to all those affected by research, not just the powerful few who invest in it.

### *The advantages of being accountable*

We have drawn attention to the dissatisfaction of both providers and users of development funding with the current situation. Clearly, the game is changing and national agricultural research systems will have to cope with and respond to growing scrutiny. But the accountability issue should not be seen only as a burden. It is also a major opportunity to ensure that long-term funding is maintained, to improve the performance of research and of its management, and to boost public support and confidence at home and abroad.

Here ISNAR has a unique and critical role in assisting the national systems. Major tools and activities used to fulfill accountability requirements are also used to ensure research's cost-effectiveness, relevance, timeliness, and practical success. These include financial management and accounting, strategic planning, monitoring and evaluation, management information systems, and feedback loops with technology transfer and farmers. Such "management components" are the content of ISNAR's day-to-day work in strengthening national research systems. Not only do we advise managers in dozens of developing countries, we also conduct research on these components, usually in cooperation with national institutes. The boxed text on pages 16 and 17 provides some concrete examples of ISNAR work that assists national research in both responding to external demands for accountability and improving internal management.

For many national systems, the problem is that basic mechanisms of accountability are often inadequate or simply do

not exist. For example, an institute may not have a working financial management system in place to control and account for expenditures. Or there may not be any formal planning whereby research objectives are clearly set out. In the absence of well-defined objectives, it is impossible to monitor and evaluate research, to measure its success or failure.

Sometimes there are structural problems within the national government bureaucracy itself, as when there is no general accounting office or auditing department or no planning office. In such cases, highly innovative solutions will be needed. The point is that the national systems must be able to successfully test, implement, and institutionalize management mechanisms if they are to convince investors in research that their money will be, or has been, well spent. But as a starting point, research managers should recognize that the external demands for accountability will likely grow and that the best approach is to turn this apparent disadvantage into an opportunity.

### *The 'trouble' with research*

For their part, donors and developing-country ministries that provide research funds must be mindful of the special nature of agricultural research and institution building. In their enthusiastic pursuit of the coveted prize called "impact", investors need to be reminded that these processes—whether in the North or South, rich or poor countries—are complex. By their very nature, they are riddled with uncertainties, plagued with risks, and burdened with payoff time frames that tax the attention span of the most sympathetic development watcher. Institution building, for example, may require close to two decades before the organizational architects see the final fruits of their work. And even then, it may be

difficult to distinguish their impact from those of other forces at work. At the same time, the criteria of success are not always as clear-cut as they are for projects such as building a road or installing a new water system.

And for research per se, the criteria of success must not be too narrow. "No" can be a valuable answer too. An agronomic trial, for example, may lead to the disappointing conclusion that a promising new variety does not solve the production problem being addressed. Yet it would be unfair to say such research was a failure. To the contrary, it is valuable because it provides important information and shifts the research toward alternative varieties.

In dealing with the sometimes thorny characteristics of agricultural research and

research institutions, donors should not be too hasty to abandon old partnerships in midstream. For when the momentum built up by consistent investment in research is lost, it becomes extremely difficult—and expensive—to regain.

To those who are patient, returns to investment in agricultural research come in the form of reduced poverty and hunger, and a protected natural resource base for generations of people to come. Yes, there are temporary dissatisfactions with current aid to agricultural development. But a little attention to improving accountability processes, from both the investor's and recipient's perspective, will go a long way to achieving the development goals they share.

### Tools of accountability

A number of tools and approaches now being developed or refined by ISNAR, as well as several projects under way, will help research institutions improve the quality and relevance of their research through better management. Some of these can also help managers respond to accountability demands. Here are a few examples from ISNAR's 1992 work:

- Perhaps the best way for research managers to understand the importance of planning, monitoring, and evaluation is to study it in their own research systems and compare experiences. With funding from IDB and others, ISNAR is working with agricultural research managers from Latin America and the Caribbean to improve their knowledge and skills in performing these important tasks. The hub of the 18-month, US \$690,000 project, is a set of 13 country case studies. The resulting lessons learned will provide the basis for training materials, development of which is being funded by IDRC.
- Complementing the above project is a "source book" on monitoring and evaluation (M&E) of agricultural research. ISNAR staff have completed this major work, which will be published in cooperation with CAB International in 1993. Aimed at research managers, it is intended as a directory of information

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sources and expertise on the subject. In describing the major uses of monitoring and evaluation techniques, the book states: "M&E is essential for improving the management and impact of agricultural research and for demonstrating research results and benefits to policymakers, donors, farm organizations, and other interested groups. These concerns fall within four main themes: enhanced accountability, impact assessment, improved implementation, and improved planning." The source book includes an overview of M&E principles and processes, followed by discussions of specific topics such as bibliometrics, economic evaluation, internal program reviews, reporting of research progress, farm-level evaluation, scoring methods, and strategic planning. IDRC has agreed to fund production and distribution of a Spanish edition.

- Rate-of-return studies, based on economic surplus theory, help research managers to make rational decisions about future research programs and their probability of success. But they also give managers ammunition to justify how they spent investors' resources and to support requests for additional funding. Building on previous experience in Latin America, ISNAR collaborated with national researchers on two rate-of-return studies during the year: one on rice and soybean research in Indonesia, the other on millet, sorghum, and cowpea research in Niger.
- ISNAR launched a study of agricultural research's links with farmer organizations. The 18-month project is supported by a US \$190,000 grant from the Dutch government. The findings will help research managers in developing countries to better address the needs of producers and understand the dynamics, advantages, and pitfalls of working with them. Explicit in the study design is the assumption that many research institutions need to make their results more relevant to farmers' needs and become more accountable to them.
- INFORM stands for Information for Agricultural Research Managers. It is an ISNAR-developed management information system that permits research program information to be integrated with information on available resources, especially people and funds. Thus, a manager can analyze a research budget or expenditures (time and money) from different angles, such as by commodity, discipline, or region. Reports generated by INFORM, while useful in planning and monitoring research projects, also help managers to quickly and accurately account to their superiors for the resources at their disposal. During the year, ISNAR continued its INFORM outreach program, providing training to about 100 developing-country research managers and information specialists.

## Programs and Services

### Service through Partnership

**"ISNAR's goal is to assist developing countries in bringing about sustained improvements in the performance of their national agricultural research systems and organizations."**

*Service through Partnership:  
ISNAR's Strategy for the 1990s*

### Introduction: New Strategy and Structure

**F**or ISNAR and its staff, 1992 was a year of great change, both in our internal operations and in our external service to the national agricultural research systems.

Externally, we began to chart a new course for our program work with the NARS. The pivot for this change of direction is ISNAR's revised and updated institutional strategy for the rest of the 1990s titled *Service through Partnership*. Approved by ISNAR's Board and published in 1992, the strategy is based on a wider interpretation of our mandate to strengthen NARS.

The centerpiece of the revised strategy is the three types of service we will provide to our NARS partners. First, for a small number of national research systems, we will offer comprehensive, long-term advice and support for institutional development. Second, for a wider range of NARS we will offer shorter-term sup-

port aimed at strengthening specific components of research policy and management. Finally, for all countries, as well as for the wider development community, we will provide knowledge and information on key issues affecting national agricultural research.

These and other key ideas and components of the ISNAR strategy are described on pages 20 and 21.

Dovetailing the approval of the new strategy was the drafting of our medium-term plan during the year. The document provides operational details and program priorities for the first five years of the period covered by the strategy. The planning exercise was part of a new CGIAR-wide effort to better synchronize the medium-term plans of all 18 member centers within a realistic funding envelope. Final approval of the ISNAR plan is expected in 1993.

ISNAR's medium-term plan calls for a

slight shift of core funds in favor of Asia. This reallocation is in line with recommendations made by the CGIAR Technical Advisory Committee for the international network of research centers as a whole. Sustaining the Green Revolution in Asia is a critical challenge. Yields appear to be reaching a plateau in many countries, while already large populations at low income levels continue to grow and natural resources are dangerously overexploited. The NARS of this region have expressed strong demand for ISNAR's support in the face of these growing threats.

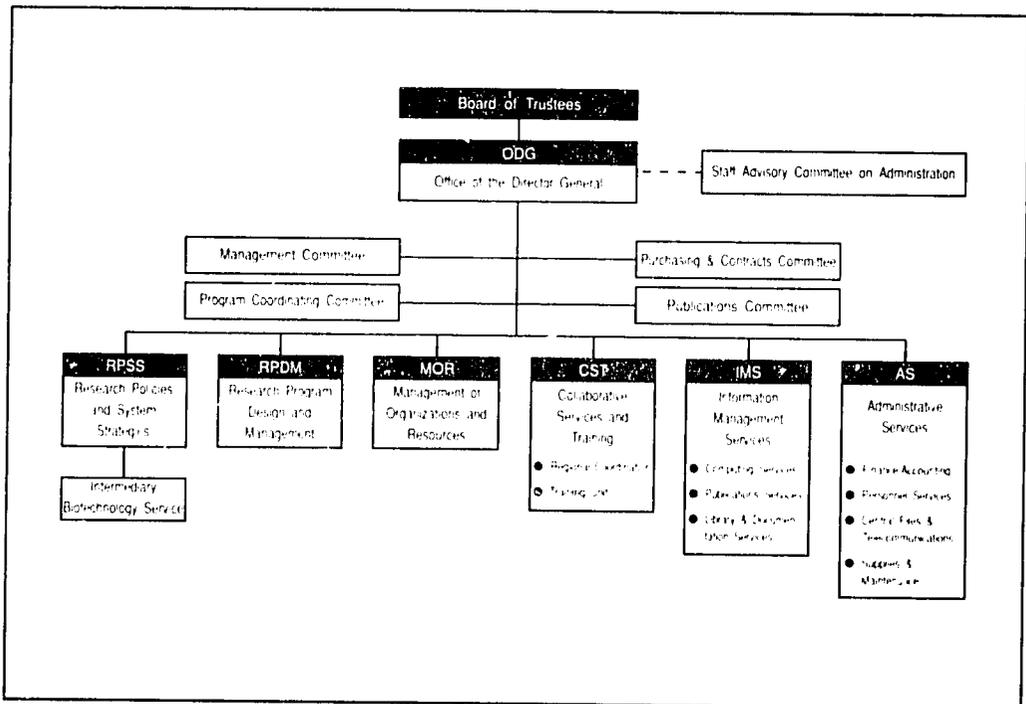
ISNAR clearly recognizes that its strategy for the remainder of the decade and its five-year plan may need some midstream corrections. In particular, we are prepared to make important adjust-

ments to accommodate better the provisions of Agenda 21, the blueprint for action that emerged from the United Nations Conference on the Environment and Development, the so-called "Earth Summit", held in Rio de Janeiro last June. ISNAR will attempt to anticipate any required changes to its program at the earliest possible date.

Internally, a profound organizational restructuring of ISNAR also took place in 1992. As a complement to the revised strategy, the new structure provides the necessary management controls and support mechanisms to enable ISNAR staff to put the new strategy into practice. (See accompanying organizational chart.)

The traditional separation of our activities into three programs organized by function—advisory service, research, and

ISNAR organizational chart



training—has been replaced by a thematic program structure, under the leadership of three program directors. The content of the programs reflects the revised ISNAR strategy. In line with the advice of the external panel that reviewed ISNAR's program and management in 1991, the three functions just mentioned have been integrated within each of the three new programs:

- Research Policies and System Strategies
- Research Program Design and Management

- Management of Organizations and Resources

Supporting these programs are three service units, each under the leadership of a director: Collaborative Services and Training, which provides ISNAR with a strategic link to NARS; Information Management Services, assisting both ISNAR staff and NARS; and Administrative Services.

Beginning on page 23, the 1992 achievements of the three programs and three service units are presented.

## **Service through partnership: highlights of ISNAR's strategy for the 1990s**

### *The changing context of national agricultural research*

National agricultural research systems in developing countries are changing. So also is the environment—political, economic, scientific, and institutional—in which they operate. During the 1990s, national research systems will face increasingly complex, diverse, and often competing demands. They will be exhorted to increase production for domestic use, to conserve natural resources, to alleviate poverty, and to expand exports. The more complex research agenda will bring with it greater institutional complexity and the need for better dialogue with policymakers. The setting of goals and research agendas may require new forms of cross-ministry coordination, particularly in the case of environmental and resource management issues. More research will be carried out in a regional framework, which may require political and institutional arrangements much more complex than the scientist-to-scientist collaboration that is possible in traditional commodity research.

The growing demands on agricultural research systems are arising against a background of greater competition for funds and declining resources, both nationally and internationally. New global concerns (such as the AIDS pandemic) and competition among clients (including the countries of Eastern Europe and the former USSR) for development assistance are cutting into traditional sources of funding. At the same time, the global recession and fiscal austerity in aid-giving countries are cutting into total funds available.

### *Strategic issues for ISNAR and the national systems*

ISNAR and its partners will pay special attention to three strategic management issues likely to be of overriding importance to almost all national systems:

- **Institutional sustainability:** keeping performance up when funding is stagnant or declining and demands on research are growing.
- **Assessment of institutional performance:** demonstrating impact to research investors and stakeholders.
- **Institutional implications of increasing research on natural resources management:** ensuring this type of research is properly organized and managed, integrated with other national research, and coordinated with regional and international efforts.

### *Targeted services and operational goals*

To meet the broad scope of demand from NARS, ISNAR offers three types of service which respond to the following operational goals:

- **Comprehensive institutional development.**  
ISNAR collaborates closely with a limited number of countries, providing comprehensive, long-term advice and support to help them strengthen their overall national agricultural research system and specific core institutions within it. Work with such countries contributes to better knowledge about holistic institutional development.
- **Strengthened research policy and management components.**  
For a wider range of national research systems and entities, ISNAR provides more focused, short-term support for strengthening specific policy and management components identified as key to improving overall performance.
- **Generation and dissemination of knowledge and information.**  
For a still wider clientele, including both national systems and the broader international development and scientific communities, ISNAR conducts research and provides up-to-date information on national systems, research policy issues, research management, and institutional development.

### *ISNAR's program: three perspectives*

The content of ISNAR's work is organized around three perspectives on agricultural research management:

- **Research policies and system strategies:**  
ensuring a NARS has a clear mission and goals, an appropriate structure, and an adequate resource base.
- **Research program design and management:**  
ensuring research is of high scientific quality, demand-driven, and relevant to users' needs.

- **Management of organizations and resources:**  
ensuring that research organizations are accountable, plan and manage their resources properly, and provide an environment conducive to innovation.

For the specific policy and management topics covered by each perspective, see pages 23, 27, and 30.

*ISNAR's mode of operation*

To meet the needs of national systems in the 1990s, ISNAR will

- better target its services to respond to the changing needs of national systems at different stages of development
- serve a wider range of research organizations
- strengthen its work on research policy, both to advise NARS and to contribute to the international policy dialogue which affects them
- forge strategic alliances with other professional organizations whose expertise complements ISNAR's

## Research Policies and System Strategies Program

*Objective: to help policymakers and agricultural research leaders in developing countries to define the mission and goals of their research system, design its structure, plan its development, and set macro-level priorities in line with national development objectives.*

*Primary clients: national policymakers and research leaders.*

*Components: global and regional cooperation, links between development policies and research, science and technology policy for research, strategic planning, system-level priority setting and evaluation, system design and structure, and mobilizing resources for research.*

The Research Policies and System Strategies (RPSS) program continued some ongoing activities and broadened its coverage to encompass several new areas. Building on earlier research activities, the program is now compiling findings and lessons into guidelines and training materials for use by NARS collaborators.

### *Small-country project: a global workshop*

ISNAR's study of issues facing small-country NARS continued during the year, with more than 30 such countries participating in a workshop held in May in Mauritius (see photo next page). During the meeting, research directors and policymakers saw the need to build on institutional diversity as an issue of primary concern. Regional organizations, national ministries of agriculture, private research institutes, parastatal commodity boards, universities, agribusinesses, and international centers are just a few of those involved in research. National research strategies must be formulated to account for this diversity. Participants also discussed prospects for regional cooperation, networking, natural resource manage-

ment, and strategies for coping with crop diversification and expansion of research on nontraditional exports.

### *Research roles for the public and private sectors*

RPSS also continued its work, begun in 1990, on the roles of the public and private sectors in developing-country agricultural research systems. Two in-depth case studies, in Ecuador and Colombia, examined existing and potential linkages between the sectors. Both highlight opportunities and constraints associated with the growing role of the private sector.

### *Expansion of Indicator Series: focus on Africa*

Work also began in 1992 to update and broaden ISNAR's "Indicator Series". This data base contains information about human and financial resources devoted to agricultural research in more than 150 countries. The data, as well as analyses largely based on them, have already been published in two separate volumes, each presenting a global overview of the world of agricultural research. The work now under way focuses on the collection of

more recent and complete data in 47 countries of sub-Saharan Africa. It is funded by the Government of Italy.

***Economic focus: structural adjustment and rates of return***

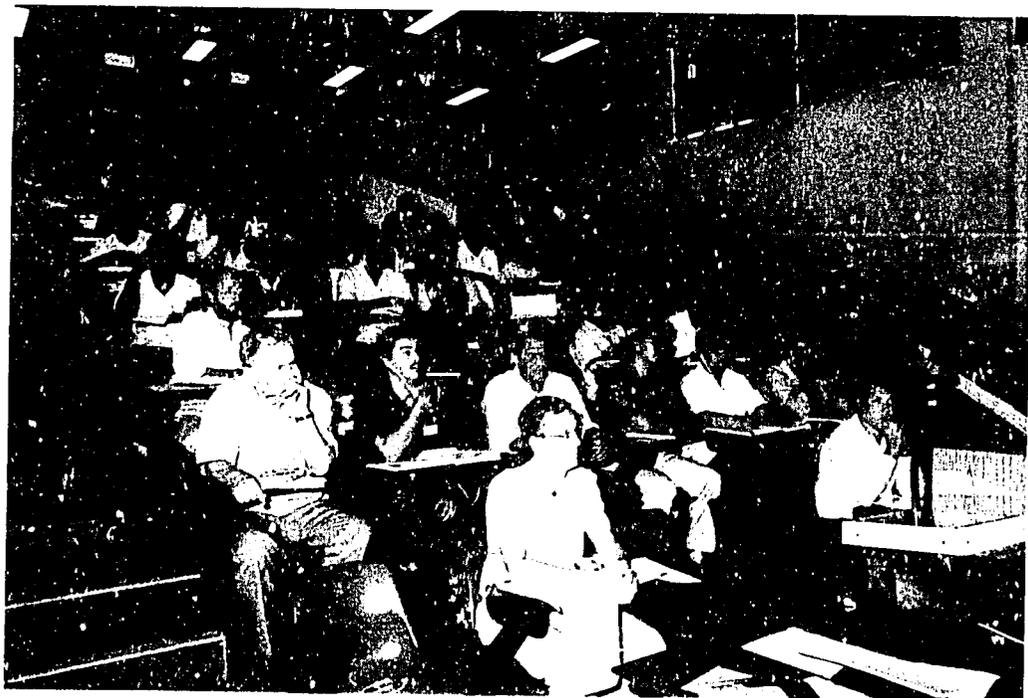
In response to a recommendation made by NARS leaders at a conference held in Berlin in January (see page 26), RPSS began a study of the effects of structural adjustment programs on NARS. A methodology was developed and a pilot case study carried out in Ghana. The study showed that while the Ghanaian NARS has benefited from the adjustment program, greater benefits could be ob-

tained if the NARS were to participate more actively in the design and implementation of future adjustment initiatives.

In work aimed at helping NARS to quantify the contribution of their research to national economic growth, three research projects were completed. First, a study of the NARS of China, conducted in cooperation with the Institute of Agricultural Economics of the Chinese Academy of Agricultural Sciences (CAAS), estimated that research contributed an impressive 20% of the recent growth in that country's agricultural production. The study was jointly supported by the Rockefeller Foundation, ISNAR, and the Center

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*Agricultural research directors and policymakers from 33 small developing countries met in the island country of Mauritius April 20 to May 1 to discuss the types of policies and organizations that would best equip them to meet their research needs. The 65 participants represented a wide range of national, regional, and international organizations. Four issues emerged as key concerns for all of the countries involved: maintaining and coordinating a research system including a variety of institutes and organizations, developing specific management techniques for research institutes in small countries, establishing linkages among small countries and with regional and international organizations, and broadening the scope of research to include the conservation and management of natural resources.*



for International Food and Agricultural Policy (CIFAP) of the University of Minnesota, U.S.A.

Second, a USAID-funded rate-of-return study of rice and soybean research in Indonesia was conducted in cooperation with the Centre for Agricultural Research Programming (CARP), part of Indonesia's Agency for Agricultural Research and Development (AARD). The study showed that even if the only output of AARD had been the new rice cultivars it bred, the rate of return to *all* research by AARD and to *all* expenditures on extension would have been 55%. This figure is several times greater than for most development projects. The study underlines the degree to which one or a few major breakthroughs can justify all previous investments. While agricultural research is often risky, clearly the payoffs can be substantial.

Finally, a rate-of-return study on millet, sorghum, and cowpea research in Niger suggested that investments in agricultural research compare favorably with local investment alternatives. The study, funded by USAID, was carried out jointly by ISNAR and the Institut National de la Recherche Agronomique du Niger (INRAN), in collaboration with Michigan State University, U.S.A.

### ***Biotechnology policy***

Following discussions with the CGIAR's task force on biotechnology (BIOTASK), a major project on biotechnology policy was brought to the implementation phase during 1992 with support from the Government of The Netherlands. The five-year project centers on an "Intermediary Biotechnology Service" (IBS) based at ISNAR headquarters. In its role as an intermediary, IBS links biotechnology activities in developed and developing countries. It acts as an independent advi-

sor to developing countries on matters of biotechnology policy and management and on related socioeconomic and technical issues. The project provides NARS policymakers with guidelines and briefing materials on a range of biotechnology-related issues. One such guideline paper, on biosafety, was published during the year. Similar papers on regulations, testing, and training are in preparation.

### ***Priority setting at the system level***

ISNAR has devoted considerable effort in the past to work on priority setting in agricultural research systems. This emphasis continued during 1992 with the near completion of a comprehensive volume on the topic. The book is expected to be published by Cornell University Press in 1993. It presents a range of approaches to priority setting in agricultural research for NARS at different stages of development and needing to answer different questions. It also presents a thorough review of the theory and practice of *ex post* (after the activity) and *ex ante* (at the planning stage) evaluation of research.

Headway was also made in combining theory and experience to produce a series of training modules on priority setting. The modules will be generic tools adaptable to the needs of a diverse group of NARS, with different levels of resources and at different stages of development. Such tools will multiply the impact of ISNAR's priority-setting work and assist NARS in setting priorities using their own resources rather than country-specific technical assistance from ISNAR. However, it is recognized that some NARS will still require direct assistance to improve and institutionalize sustainable priority-setting procedures. Upon completion of the modules, RPSS anticipates shifting the emphasis of its priority-setting work from research to training and advisory services.

## A policy dialogue in Berlin

Building a global agricultural framework that can meet current and future challenges was the focus of a week-long policy dialogue with agricultural research leaders and policymakers from developing countries. Presentations were structured around the idea that policies, technological opportunities, and institutions must interact if countries are to achieve agricultural growth, alleviate poverty, sustain their production resources, and safeguard the environment.



The dialogue, held in Berlin from January 12-18, was hosted by ISNAR and the German Foundation for International Development (DSE). The 42 participants included officials from regional organizations, donor agencies, and other international organizations, in addition to national representatives of developing countries.

A major achievement of the dialogue was that it strengthened links among researchers and policymakers in the South, as well as those between the North and the South. During the meeting, participants worked to define policies that would promote the development of a well-functioning global research system. Limited resources cannot support full-fledged, independent research systems in every country. Participants recommended that regional task-sharing be expanded. Ecoregions—agroecological zones defined along regional lines—were proposed as a basis for this division of labor.

Of the 26 recommendations made by the participants, the following six were addressed specifically to ISNAR:

- Update and increase the flow of information about NARS to research leaders and policymakers.
- Advise NARS in master planning for research at the national level.
- Develop methodologies for planning in a regional context, stressing the complementarities among NARS.
- Help NARS manage change.
- Adopt a clear strategy towards the development and use of partner organizations and individuals as “multipliers” of ISNAR’s impact.

Other recommendations were directed to specific groups of participants: NARS and policymakers, regional programs and organizations, the CGIAR and its Technical Advisory Committee, and donors. One of the workshop’s achievements was a consensus that clearly defined roles in a global agricultural system would allow each actor to contribute to common goals according to its own comparative advantage. Details of the conference proceedings are found on page 52.

### *Advisory work and publications*

In other work, RPSS staff assisted the governments of Colombia and Rwanda, as well as CARICOM, the regional Caribbean organization, in the development of strategies for agricultural research. Staff also assisted the NARS of Argentina, China, Ecuador, Indonesia, and Venezuela

in conducting major priority-setting exercises.

During the year, RPSS staff produced more than 50 publications and documents—peer-reviewed works, official reports to governments or NARS, and papers presented at international conferences.

## **Research Program Design and Management Program**

*Objective: to help national research systems design and manage well-focused, high-quality research programs that address users' needs and generate relevant knowledge and technologies.*

*Primary clients: national research directors, program leaders, and scientists with managerial responsibilities.*

*Components: research program organization; program formulation, priority setting, and budgeting; links with external sources of knowledge and technologies; management of scientific information; links between research, technology development, and users; and monitoring and evaluation of research.*

**T**hree areas in which the Research Program Design and Management (RPDM) program made substantial progress were monitoring and evaluation, priority setting, and linkages between research and technology users.

### *Priority setting and program formulation*

The program completed the development of two complementary products in the area of research program formulation and priority setting. The first is a set of guidelines on the subject; the second is a training package intended for instructors. Both products were developed largely through participatory research and product testing with NARS. The involvement of national

collaborators offered opportunities for early feedback and helped ensure the materials' relevance. It also emphasized the continuing need for significant input from the intended users.

In May, the training package and methodology were tested in ISNAR's ongoing management training project in Kenya and in a training session for NARS scientists organized by the International Livestock Centre for Africa, in Ethiopia. After further refinements, they were field-tested once again at an international training workshop in the Philippines (see box page 36). Moreover, RPDM worked with three other international agricultural research centers (CIP, ICLARM, and CIAT) in the final stages of testing and application. Dissemination of the package in its

final form is expected to begin in 1993. Similar materials for project formulation and annual programming and budgeting are now being planned.

### *Linkages with technology transfer and users*

RPDM continued its work on research's linkages with technology transfer. In addition to producing two discussion papers, the program finalized a research report synthesizing the results of the Research-Technology Transfer Linkages (RTTL) project which began in 1988. Leaders of the project presented lessons learned at a variety of collaborative workshops during the year, including two sessions of the annual course offered by the International Centre for development oriented Research in Agriculture (ICRA). In the coming year, ISNAR will field-test specific linkage mechanisms.

ISNAR's work in the area of linkages with users was expanded during the year to include farmers and farmer organizations. A project on the role of these groups in the research process was designed to initiate ISNAR's activities in this important area of program design. Three country case studies were commissioned. The project is funded by the Government of The Netherlands.

A series of discussion papers produced as part of the On-Farm Client-Oriented Research (OFCOR) project was completed. The final paper in the series will be printed and distributed in 1993. Project staff have now embarked on the development of training materials based on the findings of the study.

### *Linkages with knowledge systems and technologies*

In line with ISNAR's strategy to work with NARS in a holistic way, RPDM

began a study of NARS' linkages with knowledge- and technology-generating systems such as universities and advanced research institutes. Participants at an ISNAR-organized consultation early in the year discussed the potential value of a project on the links between universities and NARS. Participating national research leaders reviewed the various contexts in which developing countries' universities and NARS are evolving. ISNAR followed up on the consultation by proposing a project to identify opportunities and creative mechanisms for improving universities' contribution to national agricultural research. The project, if funded, will also attempt to promote cooperation between universities in the North and South in this area. It was formally presented to and endorsed by the Network of European Agricultural Universities (NATURA). Prospects are good that the project will be funded by two of ISNAR's major donors.

In another new initiative, ISNAR is working to develop a master's degree program in agricultural research management with three European universities: Wageningen Agricultural University in the Netherlands, the University of Leuven in Belgium, and the University of Reading in the U.K. Preliminary assessments of the needs of current and prospective research managers indicate that such a program could make an important contribution to strengthening developing countries' research management capacity.

### *Planning, monitoring, and evaluation*

RPDM launched the second phase of its project to improve planning, monitoring, and evaluation (PM&E) of agricultural research in Latin America and the Caribbean. Its conceptual framework was completed and endorsed by research managers in the region at a joint planning session held in Bogotá, Colombia in June.

During the year, 13 case studies of PM&E practices were completed, covering not only Latin America and the Caribbean but also North America for the purpose of comparison. Study results were discussed at a regional workshop held in October at CIMMYT in Mexico. The project, supported primarily by IDB, is being carried out in cooperation with national agricultural research organizations, IICA, PROCANDINO, and PROCISUR.

Guidelines produced and refined at the workshop will now form the basis for training packages on PM&E. ISNAR will collaborate with other international, regional, and national organizations in the region to produce and test the pilot materials. Canada's IDRC has provided additional funding for this work. In future

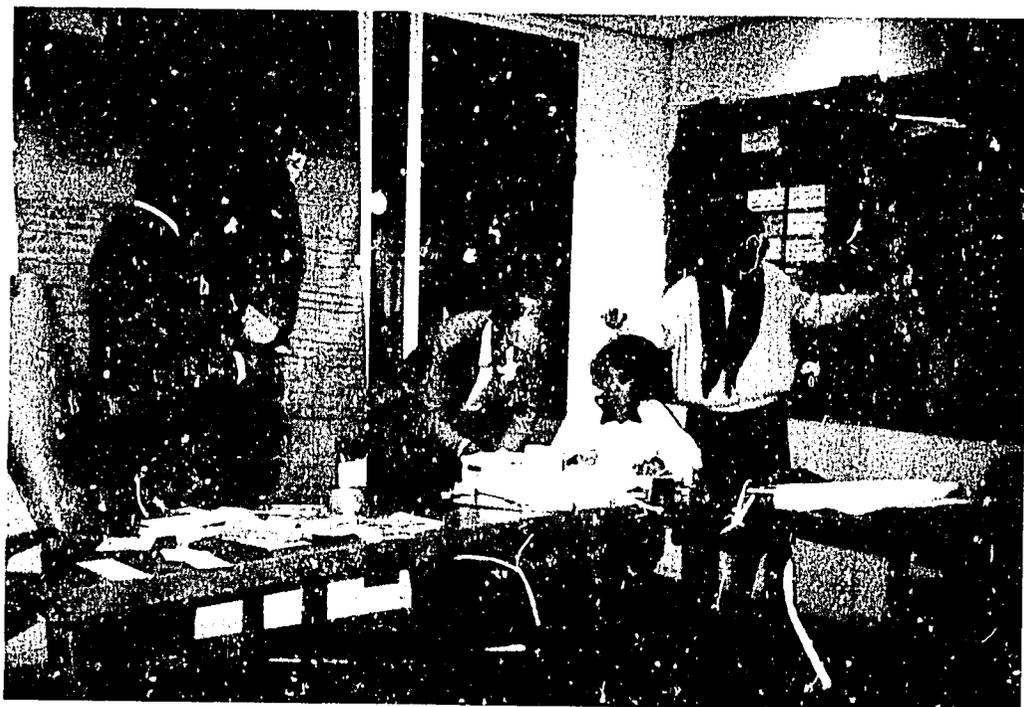
work, program staff will adapt these materials for use in ISNAR's training and advisory services for Africa and other regions.

The preparation of a source book on monitoring and evaluation continued with valuable contributions made by both ISNAR staff and specialists outside ISNAR. The book, to be published in collaboration with CAB International, is to undergo peer review in early 1993. IDRC has agreed to fund a Spanish translation.

### *Other activities*

Additionally, RPDPM undertook a number of projects to ensure continuity in advice and support for NARS in research planning, program formulation, and training,

*Members of ISNAR's newly formed Research Program Design and Management (RPDPM) program held an intensive internal planning session early in the year. In a reversal of roles, they themselves used the detailed program planning methodology that ISNAR normally recommends to NARS for designing agricultural research programs. Guidelines for using the methodology are to be published in 1993 along with related training materials.*



specifically in Bhutan, Burkina Faso, Bangladesh, Kenya, Morocco, Mali, and Niger.

Finally, RPD staff produced more than 40 publications and documents in 1992. These included peer-reviewed

works, official reports to governments or NARS, and communications presented at regional and international conferences and workshops.

## Management of Organizations and Resources Program

*Objective: to help developing countries create sustainable agricultural research organizations that provide a supportive environment for research, optimize the use of resources, and are accountable to their stakeholders.*

*Primary clients: directors, managers, and administrators of national research organizations.*

*Components: leadership and guiding values; accountability and governance; assessment of organizational performance; development and management of resources for research; information systems and communications; organization and management of operations and support services.*

In 1992, the Management of Organizations and Resources (MOR) program allocated more than 70% of its resources to advisory services and training, continuing ISNAR's service tradition. It undertook most of these activities in collaboration with other ISNAR units. Some specific areas in which the program staff assisted NARS were organizational structure, strategic planning, internal communications, human resource management, management information systems, and general support in the implementation of ISNAR review recommendations at the institute level.

### *Outreach through training*

An important part of the program's outreach to NARS was done through training in both management information systems and, to a lesser extent, human resource management.

During the year, training in information management was provided to more than 100 research managers and information specialists from Indonesia, Pakistan, Sri Lanka, Ghana, Kenya, Malawi, Tanzania, Bolivia, and Senegal. With these events, the program reaped the benefits of the institute's past research in the development of a computer-based management information system called INFORM (short for Information for Agricultural Research Managers). Much of the work to develop INFORM was made possible by special funding from the Asian Development Bank. In September 1992 the MOR program began work to translate the INFORM guidelines and other users' manuals from English into French for initial use in francophone Africa. The work is being funded by CTA.

Human resource management issues took center stage in March when 18 participants from nine francophone African

countries came to ISNAR for training in internal communications. Many participants arranged financing from donors or project budgets to be able to attend the eight-day workshop. The event showed that NARS are able and willing to secure the necessary resources to participate in events that respond to their needs and have been advertised well in advance. MOR now intends to offer an expanded training program in collaboration with both regional and national partners. With appropriate notice, participants should be able to seek financial support. This will free up ISNAR resources, allowing pro-

gram staff to concentrate more on the production of training materials.

In November and December, human resource management was again among the topics presented at two management training events. The first was a workshop organized jointly with IRRI and the University of the Philippines. (See box page 36.) The trainees were young Asian scientists recently promoted to management positions. For the workshop, MOR staff delivered a training module on assessing the performance of scientists. In the second event, organized jointly with the Philippine agricultural research council,

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*INFORM stands for "Information for Agricultural Research Managers". Developed by ISNAR, it is a computer-based management information system for research programming and budgeting. It allows research program information to be integrated with information on funding and scientific personnel to help managers analyze their budgets from different angles. In June, 20 researchers and managers from Kenya, four from Tanzania, three from Malawi, and two from Senegal were introduced to the system during a two week training workshop at ICPH in Kenya. The sessions gave them the background and practical experience to launch INFORM pilot projects in their own countries. The workshop was part of the continuing KARI/ISNAR Agricultural Research Management Linkage Training Project. Supported by a US \$1.12 million grant from the Commission of the European Communities, the project began in 1990 and will continue into 1994. Participants from outside Kenya were funded from other sources.*



PCARRD, the program conducted a training session on human resource planning. MOR's contributions to the two events relied heavily on past research efforts and were supported by ISNAR's Training Unit. The events helped to set the stage for future MOR work and are an example of how ISNAR can achieve a "multiplier effect".

Advisory service and training will systematically flow from an intensive research effort coupled with substantial contributions from the Training Unit to translate research findings into practical materials and publications.

### *Research-based service to NARS*

Past research activities, especially in human resource management and management information systems, were given renewed emphasis in 1992. At the same time, efforts were made to broaden the scope of issues addressed. A financial management research officer was recruited and began work in the areas of accountability and institutional sustainability. Important work was done on methods of performance assessment for research organization staff. Headway was also made in the preparation of practical guidelines for NARS managers on organizing master planning exercises and on planning and designing research buildings. This work is to culminate in 1993 with the publication of "how-to" manuals on each of the topics. The program also made significant contributions to the research activities of other programs, specifically in monitoring and evaluation.

### *New research initiatives*

MOR program staff launched several new research projects. Among these is a study

of **gender issues** in Asian agricultural research organizations. Project staff completed the data-gathering phase with a case study focused on the Philippines. The case study report, soon to be completed, is expected to shed light on the barriers to greater participation of women in agricultural research. The possible management implications that could accompany the increased participation of women will also be examined.

Promoting change in NARS to achieve higher levels of management efficiency is a prime concern of the MOR program. Three research projects were initiated this year to support such change. First, MOR staff began work to design a practical, self-administered **tool to diagnose specific management needs** of agricultural research organizations. The tool, to be developed in consultation with NARS leaders, will help identify critical areas of constraint and measure initial performance levels in those areas. It will also provide ISNAR with additional insights on priority areas for further work.

The second project, still at the design stage, is concerned with **monitoring institutional performance**. As designed, the project will provide research managers with an appraisal tool to follow their progress towards better management efficiency.

The third project, also at the design stage, will focus on the development of a set of **procedures for managing change**—that is, the shifts and adjustments that inevitably accompany institutional development. This last area will become increasingly important for NARS as pressure to restructure mounts. Many NARS have already been forced to downsize to fit new, more austere economic realities.

## Collaborative Services and Training

**C**ollaborative Services and Training (CST) is charged with ensuring that ISNAR's collaboration with its NARS partners is demand-driven and balanced across regions. Implementation of country-specific and regional projects is largely carried out by ISNAR's three program units. However, CST takes the lead on those activities intended to ensure a holistic approach to institutional development and the timely delivery of a complete

package of ISNAR services to selected NARS.

In this role, CST serves as a strategic link between ISNAR and its NARS partners and supports training services to them. It works closely with the NARS to identify their individual needs, their collective needs on a regional basis, and strategies for collaborating among themselves and with ISNAR.

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*Beans are among the 10 commodities accorded high priority in Uganda's new national plan for agricultural research. Below, researchers and managers gather with two ISNAR consultants (front left) to examine bean trials at the Kawaanda Experiment Station near Kampala in southern Uganda. Bean researcher M.S. Musuama addresses the group. The five-year plan was completed in 1991 by a Ugandan working group with support from ISNAR. The Government of Uganda used the plan in 1992 as an aid in negotiating a US \$28.9 million World Bank project for agricultural research and training. Throughout the year, an outposted ISNAR staff member gave continuing assistance with implementation of the plan. Along with commodity-specific programs, the master plan covers research on cattle, freshwater fisheries, natural forests, soil productivity, plant protection, crop management, and animal management.*



The staff of CST maintained close contact with ISNAR's national clients in 1992, with working visits to nearly 30 countries. They also provided outreach support to staff from ISNAR's three programs and headquarters support to outposted staff. In 1992 there were three outposted staff: in Bangladesh, Uganda, and Tanzania.

### *Completion of country projects*

Several major projects were completed during the year. One of these was intensive assistance to Mali in formulating a 12-year strategic plan for agricultural research. Others include the production and distribution of reports of ISNAR reviews of the NARS of Bhutan, Iraq, and Yemen.

### *Ongoing country projects*

In Bangladesh, an outposted ISNAR management specialist, backed by headquarters staff, continued to support senior management of the Bangladesh Agricultural Research Council (BARC) in several areas including research planning, information management, and human resource development. A similar collaborative arrangement continued in Uganda (see photo on previous page).

All major country-specific activities are listed in the "ISNAR around the World" section beginning on page 40.

### *Comprehensive institutional development*

Particularly important was work on the design of ISNAR's comprehensive institutional development (CID) service called for in the institute's new strategy. Under the CID initiative, ISNAR will establish long-term partnerships with a small number of countries. These arrangements will allow ISNAR to provide comprehensive support for the development of sustain-

able research institutions in individual NARS and to document the experience for the benefit of other national systems. Implementation of the program is expected to begin in 1993, initially with Ecuador and Uganda.

### *Regional strategies*

Also in 1992, CST's five regional coordinators drafted internal, short-term regional strategies. These define common needs and problems facing the NARS of each region and set the broad stage for ISNAR's future collaborative work. The strategies identify the following key constraints to NARS development in each of the regions:

#### **Francophone and Lusophone Africa**

- monitoring and evaluation
- financial, human, and physical resource management
- information management

#### **Anglophone Africa**

- priority setting
- program formulation and resource allocation
- linkages with technology transfer agencies
- information management

#### **Asia**

- resource allocation (at the national and institute levels)
- information management
- priority setting

#### **Latin America and the Caribbean**

- monitoring and evaluation
- program formulation and resource allocation

- priority setting
- human resource management

#### **West Asia and North Africa**

- strategic planning (at the national level)
- priority setting
- information management
- human resource management

The aim of the regional strategies is to create, wherever possible, economies of scale in ISNAR's advisory program and to encourage regional cooperation among NARS. The strategies complement ISNAR's new institute-wide strategy for the 1990s. They will remain flexible guidelines to be reviewed periodically.

#### ***Cooperation with regional development banks***

CST established working contact with the African Development Bank, assisting it with preparations for a study of its future role in support of agricultural research. CST also renewed contact with the Asian Development Bank. Discussions of opportunities for future collaboration, primarily in the area of information management, are continuing.

#### ***West African cooperative project***

Finally, CST worked with four West African countries—Burkina Faso, Mali, Niger, and Togo—in the initial design and development of a major collaborative project to strengthen and harmonize agricultural research management in the region. In part one of the project, each country will take the lead in developing and documenting improved management practices in one particular area of management. Other components of the project are joint management-improvement pro-

grams to be implemented with ISNAR assistance, strengthening of communication between participating NARS, and joint management training. Project implementation is expected to begin in 1993.

#### ***Training***

A milestone for ISNAR in the area of NARS training was the start-up of phase two of the Agricultural Research Management Training project in southern Africa. The project's first phase, funded by CIDA, USAID, and ODA, provided research leaders on-the-job training in management techniques. The second phase, funded by USAID, will run three years. It aims to build up the region's research management training capacity in such a way that it can be sustained over the long term. Responsibility is being progressively transferred from ISNAR to the national research systems via a management development institute in the region. The project's originator, the Southern African Centre for Cooperation in Agricultural Research (SACCAR), selected the East African Management Institute (ESAMI) in Tanzania as the executing agency for the project's continuation. The project's first-phase manager is now out-posted to ESAMI headquarters as project coordinator.

The Training Unit also assisted program staff in the development of a training module on agricultural research planning and priority setting. It is designed to introduce research managers and policymakers to key issues and appropriate practices in those areas.

The five-year training project with the Kenya Agricultural Research Institute continued in 1992 with four events. One of them was a multi-country training course in the use of the ISNAR-developed management information system called INFORM. (See page 31.)



### **Training for new managers**

*ISNAR took a major step in developing a comprehensive training course for agricultural research managers with a two-week pilot course held in the Philippines in December. A group of 27 new or soon-to-be-appointed research managers from 15 countries attended the event. It followed up on a recommendation for training made by Asian research managers and policymakers during an October 1991 research management consultation in Bangkok.*

*According to the recommendation, agricultural research managers are continually challenged to transform limited resources—people, funds, and facilities—into research programs that support the development goals of their countries. Most managers, however, are educated in science. They have little or no formal training in management.*

*Among topics covered in the course were research program formulation, information management, monitoring and evaluation, human resource management, and the management of on-farm research. Training modules on a number of these topics will be revised based on feedback from the participants and distributed for use by management trainers.*

*ISNAR organized the course jointly with the Philippines-based International Rice Research Institute (IRRI) and the Research Management Center (RMC) of the University of the Philippines in Los Baños. The Rockefeller Foundation provided funding.*

Finally, a major training event was a workshop in November, organized jointly by ISNAR, IRRI, and the University of the Philippines. It was held in Los Baños, the Philippines (see box and photo to the left).

Twenty-seven newly appointed managers of Asian agricultural research institutes attended the event, which provided a comprehensive introduction to research management issues.

## Information Management Services

**I**nformation Management Services (IMS) has two mandates. First, it operates inside ISNAR to assist staff in the collection, management, use, presentation, and dissemination of information. Second, it operates outside ISNAR to assist NARS in the development of appropriate scientific and management information systems.

In 1992, some 80% of IMS resources were spent inside ISNAR. This figure is projected to fall to about 50% over the medium-term plan period (1994-98), as IMS becomes progressively more involved in support to NARS.

IMS consists of three units: Publications Services, Library and Documentation Services, and Computing Services.

### *Publications*

ISNAR produced 33 official publications during the year. For some documents such as the Annual Report and Newsletter, the publishing unit handled all phases of production except printing—from writing and editing, through to electronic layout and printer liaison. In other cases, the unit handled only one or a few specific steps such as editing or printer liaison. Reproduction of all official publications was contracted to commercial printers.

In addition to the 33 official ISNAR publications, the publishing unit supervised the production of 28 other institu-

tional documents. These included reprints of official publications, unpublished reports for limited circulation, and publications produced on behalf of client NARS or other collaborating organizations. The ISNAR mailing list grew some five percent during the year, to more than 4500 records.

Some important achievements were the development of a new set of publications policies and procedures, institution of a revised process of peer review, and expansion of ISNAR's French-language publishing program. The overall shape of the publications program was also changed. Several old series were closed in preparation for the launching of three new series beginning in 1993. The new ones are Research Management Guidelines, Research Reports, and Briefing Papers.

### *Library*

The library and documentation unit continued to provide service to ISNAR staff, consultants, and visitors while moving towards a much greater involvement in the ISNAR program with NARS. The year had three notable highlights: the translation of all library records from a minicomputer to a PC-network (using micro CDS/ISIS); continued direction of a project on information management in small-country NARS (including an international

workshop in Mauritius); and a first experience in intensive on-the-job training at ISNAR of a NARS librarian.

### *Computing*

The computing unit also achieved three important objectives: a PC on the desk of every ISNAR manager, scientist, and support staff; installation of a VAX4300 as the hub of the ISNAR computer network; and the introduction of an internal and external system of electronic mail. Also, by the end of the year the unit's staff were operating a full-time help desk and a continu-

ing computer training program. All ISNAR staff are now computer literate and can be considered "PC users".

### *Collaboration with India*

In 1992, the Indian Council of Agricultural Research (ICAR) requested ISNAR to take the lead in developing a strategy for a national "agricultural research information system". As part of its external mandate, IMS has responsibility for this exercise, which is to be completed in mid-1993.

## **Administrative Services**

**F**or Administrative Services, 1992 was marked by hands-on involvement in the development and implementation of a new financial management information system and preliminary design work on three institutional data bases.

### *Better tracking of project expenditures*

The Accounting Unit completed the installation of the new, computer-based financial management system. This major achievement allows staff to produce financial reports more in line with ISNAR's new organizational structure. It also makes for easier tracking of projects by generating up-to-date reports on financial expenditures by region, program, or activity.

Development also began on a human resource information system. The computer-based system will help ISNAR administration keep track of key information on job applicants, consultants, and staff. As the first step in developing the system, staff of Administrative Services completed

a comprehensive description of the tasks that the new software will have to handle. Three software packages are being tested.

Administrative staff also contributed to defining the technical requirements for new address and registry data base software which will run on ISNAR's VAX-based computer network.

### *Increasing role of support staff*

ISNAR's support staff became increasingly involved during the year in decisions affecting their work environment. Secretaries, communications and information specialists, supplies-and-services personnel, and other support staff make up more than a third of ISNAR's total work force of 90.

For the first time, support staff attended part of ISNAR's annual Internal Program Review. Specifically, they were invited to participate in a special session on institutional management issues. This was well received and will be continued.

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### *New salary structure*

On balance, the support staff noted improvements in employment conditions and the office working environment. In particular, the new salary structure, with its step-increase system, has provided an increased measure of transparency, thereby engendering confidence among staff. Also, a new system of special post allowances was introduced in January. The

system, approved by ISNAR management in 1991, rewards staff for work done in addition to their normal duties.

### *Travel costs cut*

Finally, ISNAR's travel service reported that better planning by staff members throughout the year contributed to substantial savings in staff travel costs, one of ISNAR's largest recurring expenses.

## ISNAR around the World: Research, Advisory, and Training Activities

*The following pages present a list of 1992 ISNAR activities around the world. Included are global, regional, and national events that ISNAR either organized alone, conducted jointly with other organizations, or contributed to by providing resource people.*

### GLOBAL

#### *A policy dialogue in Berlin*

- Co-organized, with DSE, a global dialogue on agricultural research policy to year 2000; See box page 26.

#### *Small-Country Project and workshop*

- Organized a global workshop in Mauritius in April and May to discuss preliminary results of the Small-Country Project and their potential applications. The workshop was attended by 75 participants representing 29 countries, five regional organizations, five international agricultural research centers (IARCs), and six other international organizations, as follows: (countries) Barbados, Benin, Bhutan, Botswana, Burundi, Cape Verde, Congo, Dominica, Fiji, Gambia, Guinea-Bissau, Guyana, Honduras, Jamaica, Lesotho, Madagascar, Mauritania, Mauritius, Namibia, Panama, Papua New Guinea, Paraguay, Rwanda, Seychelles, Sierra Leone, Solomon Islands, Swaziland, Togo, and Trinidad and Tobago; (regional organizations) CARDI, WINBAN, INSAH, IRETA, and SADC; (IARCs) ICRISAT,

IITA, WARDA, ILRAD, CIRAD; (other international organizations) FAO, CSC, CABI, the World Bank, CTA, and UNDP.

- Held complementary workshops to discuss biotechnology issues and the management of scientific information in small countries, also in Mauritius, in April-May. USAID, CTA, ODA and the British Development Division in the Caribbean provided funding for the workshops.

#### *Planning, design, and maintenance of agricultural research buildings*

- Finalized worldwide investigations on the status and problems of research-building planning, design, and maintenance. The consulting architect wrote a draft set of practical guidelines for NARS managers, research policy-makers, engineers, and architects involved in the planning of new buildings or the remodelling of existing ones. It is to be published in 1993. Partial funding for this project was provided by the governments of Denmark and Belgium.

## AFRICA

### REGIONAL ACTIVITIES

- Conducted and published a study on the potential for regional research cooperation among Namibia, Lesotho, Swaziland, and Botswana. The study is part of the Small-Country Project.
- Contributed to the ICRA course on farming systems research (FSR) for participants from francophone countries.
- Initiated the design of a tool that will enable agricultural research managers to identify their management needs.
- Organized a regional workshop on communications in NARS at headquarters in The Hague in March. The workshop, entitled *S'organiser pour communiquer*, was attended by 18 participants from nine countries in francophone Africa. Their participation was funded by USAID, the World Bank, and other sources.
- Conducted a regional training course on the ISNAR-designed management information system, INFORM (Information for Agricultural Research Managers), in Nairobi in June and July for 28 participants from Kenya, Malawi, Tanzania, and Senegal. The workshop was part of ISNAR's continuing collaboration with KARI. Financial support was provided by the EC.
- Participated in a workshop organized by ECOWAS and by the Conference of Ministers of Agriculture, which centered on the revitalization of agricultural research in West and Central Africa. The workshop was held in Abuja, Nigeria, in October.
- Participated in the IGADD Workshop on Regional Cooperation and Col-

laboration which focused on the preparation of a "framework for action" for agricultural research in eastern Africa. The meeting took place in Addis Ababa in November.

- The director general delivered an address (titled Human Resources in African Agricultural Research: Management issues for the 1990s) at the celebration of IITA's 25th Anniversary, which took place in Ibadan, Nigeria, in December.
- Participated in a consultation of the International Federation of Agricultural Producers (IFAP) on the links between research and farmer organizations in Africa. It was held in Nairobi in December.

### BURKINA FASO

- Continued the long-standing intensive collaboration with the NARS by assisting INERA during the donor-supported mid-term review of its five-year research project. Also helped prepare specific action plans for the remaining years of the project.
- Launched a country case study of research's linkages with farmers and farmer organizations, to be carried out jointly with a national researcher.

### BURUNDI

- Provided general support and advice to ISABU on how to update the medium-term research plan and prepare 1992-93 annual work plans.

### CAMEROON

- Advised IRZ on research planning (program formulation) and, jointly with

GTZ, on priority setting; participated in IRZ/GTZ planning workshop.

### **ETHIOPIA**

- Collaborated with the NARS during a World Bank-led review of the rehabilitation needs of the research system in the wake of the recent civil disturbances.
- Assisted with the preparation of a strategic research plan, particularly with the aspects related to priority setting.

### **THE GAMBIA**

- Provided the link between a World Bank appraisal mission and an earlier research planning exercise.
- Gave advice on the establishment of statutes to govern the new research institute.

### **GHANA**

- Organized a management information seminar for research staff, at the request of the NARS leaders and consultants assisting with implementation of the research plan.
- Provided NCRI staff with training in the use of INFORM (March-April).
- Carried out field work in collaboration with Ghanaian researchers for a pilot research study on structural adjustment and the NARS.
- Launched a country case study of research's linkages with farmers and farmer organizations, to be carried out jointly with a national researcher.

### **GUINEA (GUINÉE-CONAKRY)**

- Assisted IRAG in planning the training of its staff, as part of the implementation of a human resource development project. Funding was provided through a World Bank loan to strengthen IRAG.

### **KENYA**

- Continued work under the five-year KARI/ISNAR Management Linkage Training Project, which is supported by the Commission of European Communities:
  - Provided two weeks of training at headquarters for two social scientists from KARI in January and February.
  - Held a training workshop in Nairobi on program formulation and priority setting for senior and middle-level research managers of livestock research in KARI (May).
  - Jointly organized the Third KARI Scientific Conference in Nairobi in October.
  - Organized a workshop on the use of INFORM for managers from Kenya, Malawi, Senegal, and Tanzania.
- Outposted a postdoctoral fellow to Kenya for eight months to carry out a Rockefeller/ISNAR-funded study of the relationship between development policy and the research programs for maize and milk.
- Launched a country case study of research's linkages with farmers and farmer organizations, to be carried out jointly with a national researcher.

### **MALAWI**

- Conducted a mission to evaluate the feasibility of a new structure for the NARS and to assist with a review of terms and conditions of staff employment.

### **MALI**

- Finalized the scenario chosen by the government when it adopted the strategic plan for research prepared with ISNAR assistance (September

1991); in particular, developed the human resource component.

- Participated in a roundtable conference to present the new plan to donors.
- Conducted a preliminary assessment of IER's needs in the area of information and communication management (October).
- Provided support in the initial plan-implementation phase, with a view to developing a comprehensive institutional development program with the NARS.
- Participated in a workshop on the evaluation of the FSR program at IER (November).

### **MAURITIUS**

- Collaborated on two country case studies for the Small-Country Project, one of which was published.

### **MOZAMBIQUE**

- Carried out a mission at the request of the government and of SIDA to discuss future collaboration with ISNAR, expected to commence in early 1993.

### **NAMIBIA**

- Carried out a diagnostic review of the Namibian agricultural research system in collaboration with ODA staff and with ODA financial support.

### **NIGER**

- Completed an economic study of the rate of return since 1975 to Niger's research on millet, sorghum, and cowpeas, in collaboration with INRAN's Département de Recherches en Economie Rurale and Michigan State University. A major portion of the funding was provided by USAID, with addi-

tional support from the Government of Belgium.

- Presented the results of this study, along with six other related studies of African NARS, to a USAID-sponsored symposium in Washington, D.C., in October.
- Assisted INRAN in launching its research programming procedures, with special emphasis on extension and on farmer involvement through regional councils (under a special World Bank-Niger project agreement).
- Collaborated with INRAN on the design of a research program and on the preparation of a medium-term plan.

### **NIGERIA**

- Organized, jointly with ILCA, a two-week visit to ISNAR headquarters by the new director of the National Animal Production Research Institute to study research planning and management.

### **RWANDA**

- Assisted ISAR, through a series of short-term missions, in formulating its medium-term plan and in planning its 1993 work program. Advised the Ministry of Agriculture and Livestock and inter-ministerial task forces on restructuring the NARS and updating the national agricultural research master plan.
- Assisted ISAR with preparations for a World Bank project appraisal and served on the World Bank team appraising phase two of the National Agricultural Research Project at the request of the Minister of Agriculture and Livestock.

### **SENEGAL**

- Collaborated with ISRA to design procedures for assessing the performance of its scientific staff; to introduce the

ISNAR-developed management information system, INFORM, to one of its units (where INFORM is used for human resource management); and to develop a model to plan staff size and composition. Funding was provided by USAID.

### SEYCHELLES

- Published a collaborative country case study report for the Small-Country Project.

### SIERRA LEONE

- Assisted the NARS with the preparation of a project proposal to request donor funding for a research master-planning exercise.
- Collaborated on a country case study for the Small-Country Project, which also served as a background document to begin the national strategic planning process.

### TANZANIA

- Participated in a roundtable conference held by donors to discuss the research master plan prepared with ISNAR assistance.
- Planned and prepared for the outposting of a staff member to Tanzania.

### TOGO

- Conducted an exploratory mission in October for a review and subsequent

master-planning exercise, for which the government has asked ISNAR support.

- Collaborated on a country case study for the Small-Country Project, which also served as a background document to begin the national strategic planning process.

### UGANDA

- Assisted with the development of administrative, management, and operational guidelines for the new National Agricultural Research Organization (NARO), and with the preparation of an agricultural research and training project to be financed by the World Bank.
- Participated in the development of an organizational structure including reporting procedures and linkages to extension services.
- Provided additional assistance with a recruitment plan and definition of the terms of reference and employment for new NARO employees (October), and prepared a special information-management training module to be carried out in early 1993.
- Laid the foundation for a special intensive collaboration project between Uganda and ISNAR and prepared a memorandum of understanding to this effect.

## ASIA

### REGIONAL ACTIVITIES

- Participated in an international conference on women in science and technology in Bangkok in July.
- Organized a workshop on Research Management Skills for New Directors of

Asian NARS, held in the Philippines in November. Two cosponsors, IRRI and the Research Management Center, provided logistical support.

- Conducted a study of gender issues in NARS as part of the ISNAR Gender

Project, in November and December. This activity was supported by the CGIAR Secretariat.

## BANGLADESH

- Continued collaboration with BARC to improve and strengthen research management, including components such as research planning, priority setting, information management, and monitoring and evaluation.
- Provided additional assistance with the development of a human resource master plan, with the design of a national agricultural research master plan for BARC, and with program planning at the institute level. ISNAR activities in Bangladesh are supported by USAID.

## BHUTAN

- Assisted the Ministry of Agriculture with program formulation, priority setting, human resource management, and the introduction of a project-based budgeting system.
- Assisted with the preparation of a research strategy and plan for the renewable natural resources (RNR) sector (February), and with translating the strategy and plan into a five-year operational plan for RNR research. The plan was completed in November. The above activities were supported by the Government of Switzerland.
- Provided training in INFORM for 17 scientists and managers in May, with funding from the Asian Development Bank.

## CHINA

- Completed a major study of the agricultural research system in China and its impact on agricultural productivity, and presented the findings at a workshop on

research management, held by CAAS and ISNAR in Nanjing in May.

- Co-organized an international seminar on agricultural research management held in May at Beijing Agricultural University (BAU). The other organizers were the National Center for Rural Technology Development (NCRTD) and the BAU Center for Integrated Agricultural Development (CIAD).
- Initiated a pilot research project on priority setting in Jianjsu Province, to be carried out in collaboration with the Agricultural Economics Institute of CAAS, and supported CAAS in holding a workshop on priority setting.
- Continued collaboration with Hebei Province to provide advice on research management.

## INDIA

- Began collaboration with ICAR to formulate a strategy for the creation of a national information system for agricultural research.

## INDONESIA

- Completed a USAID-sponsored economic study of the rate of return to rice and soybean research and presented the results to local policymakers and donor representatives during a one-day workshop held at AARD's headquarters in Jakarta in October.
- Carried out a second research study, jointly with AARD and ACIAR, to provide an information and analytical support base for defining research priorities at the commodity, technology, and regional levels, using an economic surplus approach and a geographical information systems (GIS) methodology.
- Assisted with procedures for integrating existing MIS data into an INFORM



### Research management in China

*Chinese agricultural research managers and policymakers participating in a May 1992 seminar on research management agreed that improving coordination among China's many research institutes was a top management priority. It was one of about 30 recommendations to the Chinese government, national research institutes, and collaborating foreign organizations.*

*The 12 participants in the two-day seminar in Beijing represented nine major research institutes. Their discussions were aimed at finding ways to improve China's agricultural research system, including its ability to reach farmers. ISNAR organized the event in collaboration with China's National Center for Rural Technology Development (NCRTD) and the Center for Integrated Agricultural Development (CIAD) of Beijing Agricultural University.*

*Above, during the seminar, an ISNAR staff member presents Prof. Cheng Xu, vice president of the Beijing Agricultural University, with a book on agricultural biotechnology.*

framework and with the completion of case studies at three research institutes.

- Assisted AARD with the training of 25 managers and scientists in INFORM, with funding from ADB.

### MALAYSIA

- Provided assistance to the Forestry Research Institute with the preparation of its strategic plan.

## PAKISTAN

- Conducted a training workshop in the use of INFORM for 19 middle-level scientists and managers, with funding from ADB.

## PHILIPPINES

- Cosponsored, with PCARRD, a human resource planning workshop for 26 middle managers from various national research institutes and regional research consortia.

- Carried out a case study of gender-related issues in the Philippines, as part of the ISNAR Gender Project.

## SRI LANKA

- Participated in a follow-up seminar on INFORM activities organized by CARRP.
- Prepared a proposal for a new project to be carried out with GTZ on management information systems in Sri Lankan agricultural research.

## LATIN AMERICA AND THE CARIBBEAN

### REGIONAL ACTIVITIES

#### CARDI

- Assisted CARDI management in preparing a 1993-2000 strategic plan by providing training and management support for both the preparation and execution of the planning exercise.
- Participated in a workshop to plan the implementation of recommendations following the external review of CARDI in 1991.
- Collaborated with CARDI staff on their country case study for the Small-Country Project.

#### PROCISUR

- Participated in a discussion of PROCISUR's 1992 program activities and consulted Southern Cone NARS leaders on their future needs and potential assistance from ISNAR.

#### *Regional workshop on strategic planning*

- Held a regional workshop in Brasilia in April on strategic planning, decentralization, and organization and structure,

for 25 senior managers from 10 South American NARS.

#### *Regional project on planning, monitoring, and evaluation (PM&E)*

- Began implementation of a regional project on planning, monitoring, and evaluation titled "Strengthening Agricultural Research Management in Latin America and the Caribbean". The project is funded by IDB, with complementary funding from IDRC.
- Held a planning workshop in Bogotá, Colombia, to exchange information on PM&E of agricultural research, to discuss training needs, and to review and refine the project's workplan (June). The workshop was hosted by IICA. Participants included planning and evaluation specialists and research managers from 16 organizations in nine countries. National-level public and private research organizations were represented, as well as universities and regional organizations.
- Commissioned 13 country case studies to document PM&E of agricultural research and assess training needs. These

were carried out between June and October. Countries participating in the project are Bolivia, Brazil, Chile, Colombia, Costa Rica, Guatemala, Trinidad & Tobago, Jamaica, Mexico, plus Canada and the U.S.A.

- Held a second regional workshop titled "Planning, Monitoring, and Evaluation of Agricultural Research: Experiences in the Americas" in October, to discuss case study findings and to plan training and information activities for 1993. Funding was provided by IDB, with complementary support from IDRC. The workshop was organized by INIFAP and ISNAR and hosted by CIMMYT (Mexico). Among the 39 participants were case study authors, officials from each of the organizations studied, and representatives of regional organizations (IDB, IICA, PROCIAN-DINO, and PROCISUR).

## **ARGENTINA**

- Planned joint INTA/ISNAR/IICA project to support the development of strategic priority-setting capacity in INTA (March).
- Commissioned a case study on planning, monitoring, and evaluation of agricultural research in INTA (IDB-funded PM&E project).

## **BOLIVIA**

- Held a short training course in Cochabamba to introduce INFORM to staff of PROINPA (May). Over 40 PROINPA staff (from CIP and IBTA) participated. This activity was fully funded by the Swiss Government.
- Commissioned a case study on planning, monitoring, and evaluation of agricultural research at CIAT (IDB-funded PM&E project).

## **BRAZIL**

- Participated as an external advisor to EMBRAPA's national-strategy planning meeting.
- Commissioned a case study on planning, monitoring, and evaluation of agricultural research in EMBRAPA (IDB-funded PM&E project.)

## **CHILE**

- Commissioned a case study on planning, monitoring, and evaluation of agricultural research at INIA (IDB-funded PM&E project).

## **COLOMBIA**

- Launched a study of public-/private-sector linkages in agricultural research.
- At the request of the general manager of the NARS, participated in discussions on a proposal to reorganize the national agricultural research system.
- Commissioned a case study on planning, monitoring, and evaluation of agricultural research at ICA (IDB-funded PM&E project).

## **COSTA RICA**

- Monitored implementation of ISNAR recommendations.
- Commissioned a case study on planning, monitoring, and evaluation of agricultural research at CONITTA (IDB-funded PM&E project).

## **ECUADOR**

- Carried out three studies in collaboration with INIAP: to continue assistance begun in 1991 with the development of a priority-setting methodology; to examine the economic rate of return to investment in corn research; to study

linkages between the public and private sectors in agricultural research.

- Presented the results of these studies in seminars to senior INIAP staff and policymakers.
- Provided support to the NARS in preparing its new statutes and developing new management tools, thereby laying the basis for an intensive collaborative program of institutional development to begin in 1993.

### **GUATEMALA**

- Commissioned a case study on planning, monitoring, and evaluation of agricultural research at ICTA (IDB-funded PM&E project).

### **HONDURAS**

- Published a collaborative country case study for the Small-Country Project.

### **JAMAICA**

- Commissioned a case study on planning, monitoring, and evaluation of agricultural research at SIRI (IDB-funded PM&E project).
- Collaborated on a country case study for the Small-Country Project.

### **MEXICO**

- Commissioned a case study on planning, monitoring, and evaluation of agricultural research at INIFAP as part of the regional PM&E project. Resources were provided by IICA and IDB.

### **TRINIDAD AND TOBAGO**

- Commissioned a case study on planning, monitoring, and evaluation of agricultural research at CARDI (IDB-funded regional PM&E project). Part of this work was done at CARDI headquarters in Trinidad and Tobago.

### **VENEZUELA**

- Assisted FONAIAP staff (in June and October) with research priority setting and with planning a two-week training course on this theme to be held in early 1993.
- Advised on a strategy for reorganizing the NARS.
- Provided assistance with agricultural research priority setting at the national level, in line with the strategy for reorganization.

## **WEST ASIA AND NORTH AFRICA**

### **REGIONAL ACTIVITIES**

- Collaborated with ICARDA and the Faculty of Agriculture and Food Sciences of the American University of Beirut on a proposal for a collaborative project at the regional level, which will lead to improved development and management of physical resources for agricultural research, including station management.

### **EGYPT**

- Finalized, with the support of CEMARI, a demonstration data base on researchers and their research activities at SWRI (one of the institutes of ARC); presented it to research managers representing ARC management, research institutes, and laboratories. The adapted methodology is expected to be operational for all of ARC in 1993.

## IRAQ

- Completed the AOAD/ISNAR draft report on the review of the national agricultural research system.
- Organized a national seminar, jointly with the Ministry of Agriculture and Irrigation and with AOAD, to discuss the report. The seminar endorsed its recommendations to improve agricultural research in the country and the final review report was published and distributed. This review was part of the SARMAC project which is partially financed by UNDP.

## JORDAN

- Drafted a project proposal to develop a strategy and medium-term plan for NCARTT, in collaboration with representatives of NCARTT and ICARDA, and numerous NCARTT stakeholders. Implementation of the project will be partially funded by USAID.
- Assisted NCARTT in developing a data base on research activities and researchers in Jordan, which will support the planning exercise.

## LEBANON

- Assisted ARI with the preparation of a proposal for a research planning project and with the establishment of a data base on researchers and research activities, following a request from the minister of agriculture.
- Collected information on the agricultural sector and agricultural research which will be used to prepare a brief review report.

## MOROCCO

- Carried out participatory research with national scientists at INRA to develop

guidelines for program-level priority setting.

- Prepared a manual and compiled a glossary, together with staff at INRA, on program planning and priority setting.
- Continued work on the development of a performance assessment system for scientific and managerial personnel, introducing improved evaluation and rating techniques.
- Assisted INRA with the improvement of its procedures for monitoring and evaluating research.

## TUNISIA

- Carried out a case study on planning, monitoring, and evaluation of agricultural research in Tunisia, in collaboration with the director of INRA, Morocco, and with staff from IRESA. This case study is partially financed by IDRC.

## SUDAN

- Finalized the 1991-92 data base on research personnel and research activities at ARC and provided support to make it operational.
- Prepared a project proposal on the development of a strategic plan for ARC. Held an orientation workshop to introduce, discuss, and adapt concepts, methods, and tools for strategic planning. The strategy is expected to be finalized in 1993. Collaborative activities with ARC are financially supported by ARETP, a joint project of the Government of Sudan and the World Bank.

## SYRIA

- Assisted DASR management in organizing a meeting of a national group to discuss the draft strategy for agricultural research and to form technical committees to develop research programs.

- Developed a data base on research activities for 1991-92.

## YEMEN

- Completed a draft review report on the Yemeni agricultural research system and presented it to a national seminar orga-

nized by AREA, AOAD, and ISNAR. The seminar participants endorsed its recommendations for improving research policy and management in the country. The review was part of the SARMAC project for which UNDP has provided partial funding.

## EASTERN EUROPE

No specific allocations have been reserved for work in Eastern Europe, even though many emerging nations fall into income classes that satisfy the equity criteria that ISNAR applies to its traditional partners. ISNAR's ability to respond favorably to requests for assistance will depend on CGIAR policies yet to be decided and on the availability of complementary resources which ensure that ISNAR's mandated partners do not suffer a reduction in service.

1992 activities in Eastern Europe included:

- Completion of a review of the agricultural research system of Hungary, funded by the EC (February).
- Participation in a workshop sponsored by EAAP on European livestock research in the 1990s, with ISNAR staff members chairing several short sessions on aspects of agricultural research policy and management (November/December).

## ISNAR Publications and Other Major Documents

### Publications about ISNAR

Service through Partnership: ISNAR's Strategy for the 1990s. April 1992.  
ISBN: 92-9118-003-3.

Service through Partnership: A Strategy Summary. September 1992.

Service et partenariat : Sommaire de la stratégie de l'ISNAR. (Translation of the English Executive Summary of the Strategy.) October 1992.

ISNAR's Medium-term Plan 1994-98. October 1992.

Annual Report 1991. August 1992.  
ISSN: 1013-0721

Rapport annuel 1991. December 1992.  
ISSN: 1019-5211.

Informe Anual 1991. December 1992.  
ISSN: 1019-522X.

ISNAR Newsletter, No. 19. May 1992.  
ISSN: 1016-958X.

ISNAR Newsletter, No. 20. August 1992.  
ISSN: 1016-958X.

L'ISNAR en bref, N° 1. June 1992.  
ISSN: 1019-6536.

L'ISNAR en bref, N° 2. August 1992.  
ISSN: 1019-6536.

ISNAR's Funding Request for 1993. September 1992.

Catalog of Publications 1992. September 1992.  
ISSN: 1019-5238.

### Reports of Meetings

Highlights of a Policy Dialogue: Future Challenges for National Agricultural Research. Berlin, January 12-18, 1992. March 1992.  
ISBN: 92-9118-001-7.

Future Challenges for National Agricultural Research: A Policy Dialogue. Proceedings of

the international conference *Challenges and Opportunities for the NARS in the Year 2000: A Policy Dialogue*. Berlin, 12-18 January 1992. Jointly published by ISNAR and the German Foundation for International Development (DSF). May 1992. ISBN: 92-9118-002-5.

Proceedings of a Workshop: Biotechnology Policy and the CGIAR. Jointly published by ISNAR and the CGIAR Task Force on Biotechnology (BIOTASK). May 1992. ISBN: 92-9118-004-1.

Production et transfert de technologies agricoles : Les relations entre les chercheurs, les responsables du transfert et les paysans. Rapport de synthèse de l'atelier international organisé à l'ISNAR (La Haye) du 20 au 25 novembre 1989. By Deborah Merrill-Sands and David Kaimowitz, with Kay Sayce and Simon Chater. (Translation from English.) June 1992.

### Country Reports

No. R53. Review of the Bhutan National Research System: The Renewable Natural Resource Sector. Report to the Royal Government of Bhutan. February 1992.

No. R54. A Review of the Agricultural Research System in the Republic of Iraq. Report to the Ministry of Planning and the Ministry of Agriculture and Irrigation. March 1992.

No. R55. Agricultural Research in Hungary: Its Future Orientation, Organization, and Financing. A Discussion Paper. Report to the Government of Hungary. December 1992.

### Special Reports

Agricultural Research in China: Its Institutional Development and Impact. By Shenggen Fan and Philip G. Pardey. August 1992. ISBN: 92-9118-007-6.

Biosafety: The Safe Application of Biotechnology in Agriculture and the Environment. By G.J. Persley, I.V. Giddings, and

C. Juma. Jointly published by ISNAR and the World Bank. May 1992. ISBN: 92-9118-005-X.

## Working Papers

No. 26f. Aperçu de la Planification Stratégique des Systèmes Nationaux de Recherche Agricole. By Marie-Hélène Collion. July 1992.

No. 41. The National Agricultural Research System of Malaysia. By M. Yusof Hashim. October 1992. *Last in the Working Paper series.*

## Small-Country Study Papers

No. 4. The Organization of a Small-Country Agricultural Research System with Broad Research Demands: Institutional Diversity in Honduras. By Mario Contreras. December 1992. ISSN: 0926-3225.

No. 5. Managing Scientific Information on a Small Island Nation: The Seychelles Experience. By Alex E. Mend and Peter Ballantyne. March 1992. ISSN: 0926-3225.

No. 6. Management of Scientific Information for Agricultural Research in Mauritius. By Rosemay Ng Kee Kwong and Peter Ballantyne. October 1992. ISSN: 0926-3225.

No. 7. National Agricultural Research in a Regional Context: The Small Countries of Southern Africa. By Andrew Okello and Pablo Eyzaguirre. December 1992. ISSN: 0926-3225.

No. 8. Management of Scientific Information for Agricultural Research in Small Countries. Highlights of a Meeting, Réduit, Mauritius, 20-24 April 1992. August 1992. ISSN: 0926-3225.

No. 9. Managing Information Resources and Services for Agricultural Research in Swaziland. By Makana Mavuso and Peter Ballantyne. December 1992. ISSN: 0926-3225.

## Research-Technology Transfer Linkages (RTTL) Discussion Papers

No. 11. Motive Forces: External Pressure and the Dynamics of Technology Systems. By David Kaimowitz. June 1992. ISSN: 0925-0034.

No. 12. Management of Intergroup Linkages for Agricultural Technology Systems. By Anna Wuyts-Fivawo. November 1992. ISSN: 0925-0034.

## Book Summary

*Summary of Agricultural Research Policy: International Quantitative Perspectives.* By Philip Pardey, Hugh Quigley, and Johannes Roseboom. May 1992. ISBN: 92-9118-006-8.

## ISNAR Discussion Papers

*Discussion Papers are preliminary reports of work in progress at ISNAR. They are neither formally reviewed nor edited and their circulation is limited.*

No. 92-1. Preparing a Medium-Term Plan for a National Agricultural Research Organization (NARO). By R.H. Retzlaff. 1992.

No. 92-2. Guidelines for Planning and Designing Agricultural Research Buildings. By R.W. Etheredge. 1992.

No. 92-3. Research, Productivity and Output Growth in Chinese Agriculture. By S. Fan and P.G. Pardey. 1992.

No. 92-4. Bangladesh: Profile of Men and Women Scientists in the Bangladesh National Agricultural Research System. By D.P. Gapsin, K. Sheridan, and R. Witters. 1992.

No. 92-5. Planning, Monitoring, and Evaluation in the Agricultural Research Center, Washington State University (with a section on planning, monitoring, and evaluation in other parts of the U.S. agricultural research system). By J. Nielson. 1992.

No. 92-6. Planeación, seguimiento y evaluación en el CENICAFE, Colombia. By R. Posada. 1992.

No. 92-7. Planeación, seguimiento y evaluación en el ICA, Colombia. By R. Posada. 1992.

No. 92-8. Planeación, seguimiento y evaluación en el ICTA, Guatemala. By L. Romano. 1992.

No. 92-9. Planeación, seguimiento y evaluación en el INTA, Argentina. By D.R. Hogg. 1992.

No. 92-10. Planeación, seguimiento y evaluación en el CIAT de Santa Cruz, Bolivia. By A. Bojanic. 1992.

No. 92-11. Planeación, seguimiento y evaluación en el INIFAP, México. By E. Alarcón and E.E. Calles. 1992.

No. 92-12. Planeación, seguimiento y evaluación en la CONITTA, Costa Rica. By L. Romano. 1992.

No. 92-13. Public and Private Sector Interactions in Agricultural Research in Less-Developed Countries: The Case of Ecuador. By C.A. Falconi. 1992.

No. 92-14. Interacciones entre el sector público y privado en la investigación agrícola en países en desarrollo: El caso de Ecuador. By C.A. Falconi. 1992.

No. 92-15. Structural Adjustment and Agricultural Research in Ghana. By S.R. Tabor, H.K. Quartey Papafio, and K.A. Haizel. 1992.

No. 92-16. A Research Program Planning Method: Illustration from Faba Bean in Morocco. By M.H. Collion and A. Kissi. 1992.

### Other ISNAR documents

Summary of Papers Presented at the International Seminar on Agricultural Research Management. Beijing, China, 25-27 May 1992. Edited by R.B. Contant and A.M. Marks. Jointly produced by NCRTD/SSTC, ISNAR, and CIAD/BAU. October 1992.

Summary of Papers Presented at the Consultation on Agricultural Research Management in Asia: Future Strategy. Bangkok, Thailand, 7-9 October 1991. Edited by Dely P. Gapasin. September 1992.

Fortalecimiento de la Administración de la Investigación Agropecuaria en América Latina y el Caribe. Informe del Taller de Planeación del Proyecto. Bogotá, Colombia, 9 a 12 de junio de 1992. Edited by D. Horton and B. Uribe. Jointly produced by ISNAR, IICA, and IDB. 1992.

An Economic Analysis of Research and Technology Transfer of Millet, Sorghum, and Cowpeas in Niger. Report to USAID by V. Mazzucato and S. Iy. October 1992.

Determinación de Prioridades de Investigación Agropecuaria en Ecuador. By J. Palomino and G.W. Norton. Jointly produced by INIA (Ecuador), FUNDAGRO, and ISNAR. 1992.

The Economic Returns to Indonesian Rice and Soybean Research: An AARD/ISNAR Report. By P.G. Pardey, R.K. Lindner, E. Abdurachman, S. Wood, S. Fan, W.M. Eveleens, B. Zhang, J.M. Alston. 1992.

### External publications by ISNAR staff

The names of ISNAR staff members are in bold type.

Alwang, J. and **G.W. Norton**. 1992. The Changing Role of Natural Resources as Development Progresses. Department of Agricultural Economics, Virginia Polytechnic Institute and State University, SP-92-7.

**Bonte-Friedheim, C.H.** 1992. The Role of Research in Agricultural Development. *Quarterly Journal of International Agriculture* 31(1): 6-24.

Dey, M.M. and **G.W. Norton**. 1992. Analysis of Agricultural Research Priorities in Bangladesh. Dhaka, Bangladesh: Bangladesh Agricultural Research Council.

**Eyzaguirre, P.B.** 1992. Farmer Knowledge, World Science and the Organization of Agricultural Research. In: *Diversity, Farmer Knowledge, and Sustainability*, edited by J.L. Moock. Ithaca, NY: Cornell University Press.

**Fan, S.** and V.W. Ruttan. 1992. Induced Technical Change in Centrally Planned Economies. *Agricultural Economics* 6(4): 301-314.

**Horton, D.E.** 1992. *La papa: Producción, comercialización y programas*. Montevideo, Uruguay: Centro Internacional de la Papa and Editorial Hemisferio Sur.

**Horton, D.E.** 1992. Lessons from the Mantaro Valley Project, Peru. In: *Let Farmers Judge*, edited by W. Hiemstra, C. Reijntjes, and E. van

der Werf. London, U.K.: Intermediate Technology Publications.

**Horton, D.E.** and J.L. Anderson. 1992. Potato Production in the Context of the World and Farm Economy. In: *The Potato Crop: The Scientific Basis for Improvement*, edited by P.M. Harris. London, U.K.: Chapman and Hall.

Kazmierczak Jr., R.E. and **G.W. Norton**. 1992. Estimating the Dynamic Impacts of insecticide Regulations in the Presence of Pesticide Resistance. Abstract. *Southern Journal of Agricultural Economics* 24(1): 292.

**Kramer, C.** 1992. Performances et résultats en quête d'objectivité. *Journal des Associations Patronales* 7: 157-159.

**Kramer, C.** 1992. Communiquer, pour quoi faire ? *Cahiers d'Information du Directeur de Personnel* 20: 18-20.

**Kramer, C.** 1992. Au crédit du directeur exigeant. *Cahiers d'Information du Directeur de Personnel* 20: 25-26.

**Kramer, C.** 1992. Est-il possible de choisir sa politique de personnel? *Journal des Associations Patronales* 11: 267-277.

**Kramer, C.** 1992. Exigences de l'évaluation : Des plans aux réalisations. *Cahiers d'Information du Directeur de Personnel* 21: 61-66.

**Kramer, C.** 1992. Rapport sur le développement humain mondial. *Cahiers d'Information du Directeur de Personnel* 22: 75-78.

**Kramer, C.** 1992. Progrès humains contestés. *Cahiers d'Information du Directeur de Personnel* 23: 84-86.

**Merrill-Sands, D.** and Pammi Sachdeva. Status of Internationally-Recruited Women in the International Agricultural Research Centers of the CGIAR: A Quantitative Perspective. CGIAR Gender Program Working Paper No. 1. Washington, D.C.: CGIAR Secretariat.

**Merrill-Sands, D.**, P. Ewell, S. Biggs, R.J. Bingen, J. McAllister, and S. Poats. 1992. Management of Key Institutional Linkages in On-Farm Client-Oriented Research. In: *Diversity, Farmer Knowledge and Sustainability*, edited by J.L. Moock and R. Rhoades. Ithaca, NY and London: Cornell University Press.

**Morlon, P.**, A. Hibon, **D.E. Horton**, M. Tapia, and E. Tardieu. Quelles mesures et quels critères d'évaluation? In: *Comprendre l'agriculture paysanne dans les Andes Centrales*, edited by P. Morlon. Paris, France: Institut National de la Recherche Agronomique.

**Nestel, B.** and A.M. Thro. 1992. Progress in Cassava Biotechnology Research. *Biotechnology and Development Monitor* 13(December): 16-17.

**Nestel, B.**, G. Gijsbers, and **P.G. Ballantyne**. 1992. A Minithesaurus as an Aid to the Management of Agricultural Research. *IAALD Quarterly Bulletin* XXXVII, 4: 215-223.

**Norton, G.W.** and J. Alwang. 1992. Sustainable Agricultural Development: Implications for Evaluating Technical and Institutional Change. Department of Agricultural Economics, Virginia Polytechnic Institute and State University, SP-92-8: 1-16.

**Norton, G.W.** and J. Ortiz. 1992. Reaping the Returns to Research. *Journal of Production Agriculture* April-June: 203-209.

**Norton, G.W.**, J. Ortiz, and **P.G. Pardey**. 1992. The Impact of Foreign Assistance on Agricultural Growth. *Economic Development and Cultural Change* 40(4): 775-786.

**Norton, G.W.**, **P.G. Pardey**, and J.M. Alston. 1992. Economic Issues in Agricultural Research Priority Setting. *American Journal of Agricultural Economics* 74(5): 1089-1094.

**Pardey, P.G.**, **J. Roseboom**, and B.J. Craig. 1992. A Yardstick for International Comparisons: An Application to National Agricultural Research Expenditure. *Economic Development and Cultural Change* 40(2): 333-349.

**Perrault, P.T.** and **H. Elliott**. 1992. Impact de l'ajustement structurel sur l'éducation et la recherche. In: *Contraintes de l'ajustement structurel et avenir de l'éducation et de la formation dans les pays francophones en développement*. (Actes du Colloque International organisé à l'occasion du XXème anniversaire de l'École Internationale de Bordeaux. Bordeaux, du 29 septembre au 2 octobre 1992). Bordeaux: Agence de coopération culturelle et technique: 487-498.

**Perrault, P.T.** and **W.A. Stoop**. 1992. Le système de la recherche au Bénin et le rôle de la re-

cherche-développement. In: *Recherche-Développement au Bénin: Acquis et Perspectives* (Actes du séminaire national sur la recherche-développement: Cotonou, Bénin, 3-7 décembre 1990). Cotonou, Bénin: Direction de la Recherche Agronomique, Recherche Appliquée en Milieu Réel.

Parsley, G.J. and B. Nestel. 1992. Biotechnology Policy and the CGIAR. *AgBiotech News and Information* 4(5): 125N-131N.

Roseboom, J. and P.G. Pardey. 1992. Measuring the Development of National Agricultural Research Systems. *Scientometrics* 23(1): 169-190.

Roseboom, J. and P.G. Pardey. 1992. Measuring the Development of National Agricultural Research Systems. In: *Les indicateurs de science pour les pays en développement (Science indicators for developing countries)*, edited by R. Arvanitis and J. Gaillard. Paris: Editions de l'ORSTOM.

## Consultants to ISNAR

Name, Affiliation, Location	Nature of Consultancy
Enrique Alarcón IICA San José, Costa Rica	carried out a case study in Mexico for the IDB/IDRC-funded project on planning, monitoring, and evaluation of agricultural research in Latin America and the Caribbean
Julian Alston University of California Davis, U.S.A.	collaborated on the USAID-funded study of the rate of return to rice and soybean research in Indonesia and collaborated on the preparation of a book on research evaluation and priority setting
Vermando Aquino Institute of Plant Breeding University of the Philippines Los Baños, The Philippines	assisted with preparations and data collection for a pilot case study on gender staffing issues in NARS in developing countries
Jaap Arntzen Department of Environmental Science University of Botswana Gaborone, Botswana	carried out a study of the policy implications of environmental issues for agricultural research systems in Southern Africa, with special focus on small countries
Carlos Henrique Ayres EMBRAPA Brasília, Brazil	carried out a case study in Canada for the IDB/IDRC-funded project on planning, monitoring, and evaluation of agricultural research in Latin America and the Caribbean
James Bingen Michigan State University East Lansing, Michigan, U.S.A.	participated in a study of the organization and structure of NARS and (jointly) supervised a research assistant based at Michigan State University
Alan Bojanic National Secretariat for the Environment (SENMA) La Paz, Bolivia	carried out a case study in Bolivia for the IDB/IDRC-funded project on planning, monitoring, and evaluation of agricultural research in Latin America and the Caribbean
Jairo Borges EMBRAPA Brasília, Brazil	carried out case studies in Brazil and Chile for the IDB/IDRC-funded project on planning, monitoring, and evaluation of agricultural research in Latin America and the Caribbean
Hilarion Bruneau Independent Consultant Trois Rivières, Québec Canada	advised on the financial component of ISNAR's Management of Organizations and Resources Program, identifying areas where ISNAR could make a significant contribution to strengthening financial management in NARS
A. Hugh Bunting University of Reading Reading, United Kingdom	completed a review of the organization and structure of NARS in sub-Saharan Africa
Adriaan Burger Independent Auditor Veenendaal, The Netherlands	provided internal auditing services to ISNAR
Lawrence Busch Michigan State University East Lansing, Michigan, U.S.A.	led a study on the organization and structure of NARS and (jointly) supervised a research assistant based at Michigan State University

Simon Chater Free-Lance Editor Exeter, United Kingdom	edited the ISNAR strategy document and drafted the executive summary
John Cropper Free-Lance Editor Rolle, Switzerland	assisted with the writing and editing of a Caribbean regional study for the Small-Country Project
Yousef Ahmed Dash Ministry of Agriculture Khartoum, Sudan	assisted with the gathering of data on research personnel and expenditures in Sudan, as part of the ISNAR Indicator Series project
Kinlay Dorji Planning and Policy Division Ministry of Agriculture Thimphu, Bhutan	collaborated on the final review of Bhutan's research strategy and plan for the renewable natural resource sector, as part of a joint project by the Royal Government of Bhutan and ISNAR aimed at strengthening the RNR sector
Robert W. Etheredge Independent Consultant Reston, Virginia, U.S.A.	drafted guidelines on the design, planning, and maintenance of agricultural research buildings
Shenggen Fan University of Arkansas Fayetteville, Arkansas, U.S.A.	assisted the Institute of Agricultural Economics of CAAS in carrying out a pilot project on research evaluation and priority setting in Jiangsu Province
Hussein Faraj INRA Rabat, Morocco	conducted a comparative study of the procedures used to monitor and evaluate agricultural research in Tunisia and Morocco
Patricio S. Faylon PCARRD Los Baños, The Philippines	assisted with preparations and data collection for a pilot case study on gender staffing issues in NARS in developing countries
Alan Fletcher Communication Consultant Ithaca, New York, U.S.A.	edited the proceedings of a conference titled Challenges and Opportunities for the NARS in the Year 2000: A Policy Dialogue, which was held in Berlin in January
William K. Gamble Independent Consultant Brainerd, Minnesota, U.S.A.	served on a committee examining the issue of the location of ISNAR headquarters; led a mission to Malawi to assist with priority setting and reorganization of the NARS
Elon Gilbert Independent Consultant Serrekunda, The Gambia	participated in a mission to Malawi to assist with priority setting and reorganization of the NARS
Prabhu Guptara Independent Consultant Surrey, United Kingdom	conducted a training course on presentation skills for ISNAR staff
K.A. Haizel National Agricultural Research Project Accra, Ghana	participated in a study of the effects of structural adjustment on the agricultural research system of Ghana
J.J. Hardon Centrum Genetische Bronnen Nederland Wageningen, The Netherlands	served on a committee examining the issue of the location of ISNAR headquarters
Tar. Sri Dato' Mohammed Yusof bin Hashim MARDI Kuala Lumpur, Malaysia	prepared a working paper on Malaysia's national agricultural research system

Maritza Hee Houng Central Experiment Station Centeno Trinidad & Tobago	carried out a case study on the management of scientific information in Trinidad and Tobago
David Hogg INTA Buenos Aires, Argentina	carried out a case study in Argentina for the IDB/IDRC-funded project on planning, monitoring, and evaluation of agricultural research in Latin America and the Caribbean
H. Krishan Jain Independent Consultant New Delhi, India	prepared a policy brief on biotechnology priorities for NARS
John Komen University of Amsterdam Amsterdam, The Netherlands	carried out research as part of a series of biotechnology country studies
Robert Lindner School of Agriculture University of Western Australia Redlands, Australia	collaborated on a USAID-funded study of the rate of return to rice and soybean research in Indonesia
Virginia Mabesa PCARRD Los Baños, The Philippines	assisted with preparations and data collection for a pilot case study on gender staffing issues in NARS in developing countries
Hlezi Mabeza University of Manitoba Winnipeg, Canada	evaluated a program of annual workshops for African students on management of agricultural research, held at the University of Manitoba
Paul Marcotte Prescott College Prescott, Arizona, U.S.A.	conducted a review of literature on leadership issues in NARS, in preparation for a project proposal
Adrienne Martin Natural Resources Institute Chatham Maritime Kent, United Kingdom	participated in a diagnostic review of agricultural research in Namibia
Makana Mavuso University of Swaziland Kwaluseni, Swaziland	carried out a case study on the management of scientific information in Swaziland
Bonnie McClafferty Independent Consultant Chavannes de Bois, Switzerland	helped to prepare and analyze data on men and women scientists in the NARS of Sri Lanka, Senegal, Zimbabwe, Ecuador, and the Gambia
Alex Mend Ministry of Agriculture and Fisheries Mahe, Rep. of the Seychelles	carried out a case study on the management of scientific information in the Seychelles
Martin Mentzi Independent Consultant Thimpu, Bhutan	served on the ISNAR team that assisted Bhutan's Ministry of Agriculture in preparing a research strategy and plan for its renewable natural resource sector
Marciano Morales-Bermudez CIP Lima, Peru	translated English-language case studies into Spanish for the IDB/IDRC-funded project on planning, monitoring, and evaluation of agricultural research in Latin America and the Caribbean
Amir Muhammed Asianics Agro-Dev International Islamabad, Pakistan	served on a committee examining the issue of the location of ISNAR headquarters

D.M. Mukunya Faculty of Agriculture University of Nairobi Nairobi, Kenya	assisted with the gathering of data on research personnel and expenditures in Kenya, as part of the ISNAR Indicator Series project
Mariechel Navarro National Institutes of Biotechnology and Applied Microbiology University of the Philippines Los Baños, The Philippines	assisted with preparations and data collection for a pilot case study on gender staffing issues in NARS in developing countries
Georges Ndamage ISAR Butare, Rwanda	documented the planning of agricultural research in Rwanda since 1981
James Nielson Independent Consultant Seattle, Washington, U.S.A.	carried out a case study in the United States for the IDB/IDRC-funded project on planning, monitoring, and evaluation of agricultural research in Latin America and the Caribbean
Rosemay Ng Kee Kwong MSIRI Réduit, Mauritius	carried out a country case study on the management of scientific information in Mauritius
Andrés R. Novoa PROCARDI Bogotá, Colombia	synthesized the case study results of the IDB/IDRC-funded project on planning, monitoring, and evaluation of agricultural research in Latin America and the Caribbean
G.K.C. Nyirenda CARO/DAR Ministry of Agriculture Lilongwe, Malawi	assisted with the gathering of data on research personnel and expenditures in Malawi, as part of the ISNAR Indicator Series project
M. Onanga Direction générale de la recherche scientifique et technique Brazzaville, Congo	assisted with the gathering of data on research personnel and expenditures in the Congo, as part of the ISNAR Indicator Series project
Samsundar Parasram CARDI St. Augustine, Trinidad & Tobago	carried out a regional study of the national agricultural research systems in the Caribbean
H.K. Quartey-Papafio Independent Consultant Accra, Ghana	participated in a study of the effects of structural adjustment on the agricultural research system of Ghana
Rafael Posada IICA Bogotá, Colombia	carried out a case study in Colombia for the IDB/IDRC-funded project on planning, monitoring, and evaluation of agricultural research in Latin America and the Caribbean
Armando Rabuffetti INIA Montevideo, Uruguay	participated in a mission to Malawi, to assist with priority setting and reorganization of the NARS
Lloyd Rankine University of the West Indies St. Augustine, Trinidad & Tobago	carried out a case study for the IDB/IDRC-funded project on planning, monitoring, and evaluation of agricultural research in Latin America and the Caribbean
Virginia Recta Philippine Rice Research Institute Muñoz Nueva Ecija, The Philippines	assisted with preparations and data collection for a pilot case study on gender staffing issues in NARS in developing countries

Mark Reed Free-Lance Institutional Design Consultant Philomath, Oregon, U.S.A.	assisted with the preparation of a training module on priority setting at the institute level
Janice Reid CARDI Kingston, Jamaica	carried out a case study on the NARS of Jamaica for the Small-Country Project
Patrick Robinson Consultant on Forest Research Kathmandu, Nepal	served on the ISNAR team that assisted Bhutan's Ministry of Agriculture in preparing a research strategy and plan for its renewable natural resource sector
Miguel Rojas ICA San José, Costa Rica	carried out a study of the policy and institutional implications of agricultural diversification and the promotion of nontraditional exports for small-country research systems in Central America
Niels Röling Wageningen University Wageningen, The Netherlands	co-authored a paper entitled Coordinating Technology Generation, Transfer, and Use: Selected Issues; participated in the NCRIID- ISNAR- CIAD-BAU seminar held in Beijing, China
Luis Romano ICA Bogotá, Colombia	carried out a case study in Guatemala for the IDB- IDRC-funded project on planning, monitoring, and evaluation of agricultural research in Latin America and the Caribbean
C. Ford Runge University of Minnesota St. Paul, Minnesota, U.S.A.	prepared a paper on the sustainability of production environments and presented it at the policy conference held in Berlin in January titled Challenges and Opportunities for the NARS in the Year 2000: A Policy Dialogue
Rolinda Sanico Philippines Root Crops Research and Training Center Visayas State College of Agriculture Visayas, The Philippines	assisted with preparations and data collection for a pilot case study on gender staffing issues in NARS in developing countries
Alain Sarton Plein Emploi Paris, France	conducted a training session during the francophone communications management workshop <i>Organiser pour communiquer</i> held at ISNAR headquarters
Robert Sirdey Mediacom S.A. Geneva/Meyrins, Switzerland	assisted with preparations for the francophone communications management workshop <i>Organiser pour communiquer</i> and participated as a resource person
Lisette M. Staal University of Florida IFAS Gainesville, Florida, U.S.A.	assisted with the preparation of training materials resulting from two ISNAR studies: one on on-farm research, the other on linkages between research and technology-transfer agents
Steven R. Tabor Independent Consultant Leiden, The Netherlands	prepared a research proposal and methodological framework for an investigation into the effects of structural adjustment policies on NARS; led a follow up study on this topic in Ghana
Kingaw Wangi Head, Human Resource Development Unit Ministry of Agriculture Thimphu, Bhutan	collaborated on the final review of Bhutan's research strategy and plan for the renewable natural resource sector

Edward Weber Independent Consultant Nepean, Ontario Canada	carried out a case study in Jamaica for the IDB/IDRC-funded project on planning, monitoring, and evaluation of agricultural research in Latin America and the Caribbean
Stanley Wood Independent Consultant Bogor, Indonesia	collaborated on a USAID-funded study of the rate of return to rice and soybean research in Indonesia; collaborated on the INTA/ISNAR/ICA project to improve INTA-Argentina's capacity for strategic planning of research; participated in a pilot project on research evaluation and priority setting, carried out by ISNAR and the Institute of Agricultural Economics, CAAS, China
Vicente Zapata CIAT Cali, Colombia	advised on an assessment of training needs that was carried out at the workshop on research planning, monitoring, and evaluation held in Mexico in October

## ISNAR Staff

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**Lorraine Walton,\*** Secretary  
**Cathy Wheat,** Senior Production Secretary

\* Left during 1992

\*\* Joined during 1992

ISNAR Staff 1992



## **Donors Supporting ISNAR's Program**

### **Contributors of Core Funding**

#### **Australia**

Australian Centre for International Agricultural Research

#### **Belgium**

Administration Générale de la Coopération au Développement

#### **Canada**

Canadian International Development Agency

#### **China**

#### **European Economic Community**

#### **France**

#### **Germany**

Federal Ministry of Economic Cooperation (BMZ)

#### **Italy**

#### **Japan**

#### **The Netherlands**

#### **The Philippines**

#### **Spain**

#### **Sweden**

Swedish Agency for Research Cooperation with Developing Countries

#### **Switzerland**

Swiss Development Cooperation

#### **UK**

Overseas Development Administration

#### **United States**

Agency for International Development

#### **World Bank**

### **Contributors of Complementary Funding\***

Agricultural Research, Extension, and Training Project (Sudan)

Asian Development Bank

Australian Centre for International Agricultural Research

Australian International Development Assistance Bureau

Bangladesh Agricultural Research Council

British Development Division

Canada-Egypt-McGill Agricultural Response Program

Canadian International Development Agency

Consultative Group on International Agricultural Research

Crops Research Institute (Ghana)

Danish International Development Agency

Deutsche Gesellschaft für Technische Zusammenarbeit (Germany)

Development Perspectives

European Economic Community

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Fundación para el Desarrollo Agropecuario (Ecuador)  
German Foundation for International Development (DSE)  
Hungary (Pologne-Hongrie : Action pour la Reconstruction Economique)  
Indian Council of Agricultural Research  
Institut de Recherche Agronomique de Guinée  
Institut des Sciences Agronomiques du Rwanda  
Institut National de Recherches Agronomiques du Niger  
Inter-American Development Bank  
International Center for Tropical Agriculture  
International Development Research Centre (Canada)  
International Maize and Wheat Improvement Center  
Italy  
Malawi  
Michigan State University (U.S.A.)  
National Farming Systems Research Project (Tanzania)  
The Netherlands  
Overseas Development Administration (U.K.)  
Proyecto de Investigación de la Papa (CIP/Bolivia)  
Rockefeller Foundation  
Swedish Agency for Research Cooperation with Developing Countries  
Swiss Development Cooperation  
Technical Centre for Agricultural and Rural Cooperation  
Uganda  
United Nations Development Programme  
United States Agency for International Development  
World Bank  
World Food Council

\* Special project funding and reimbursement of services rendered

## ISNAR Financial Summary

### Statement of Financial Position (as of December 31, 1992, in thousands of U.S. dollars)

ISNAR's operating budget for 1992 was \$10.935 million of which \$6.839 million was core-unrestricted grants. The remainder was core-restricted grants and "complementary" (i.e., special project) funding.

<u>Assets</u>	<u>Current Year</u>	<u>Prior Year</u>
<b><u>Current Assets</u></b>		
Cash and Cash Equivalents	2,333	2,630
Accounts Receivable:		
Donors	2,131	1,319
Employees	111	97
Others	149	197
Prepaid Expenses	35	404
Total Current Assets	<u>4,759</u>	<u>4,647</u>
<b><u>Fixed Assets</u></b>		
Property, Plant and Equipment	2,083	1,982
Less: Accumulated Depreciation	<u>(1,559)</u>	<u>(1,288)</u>
Total Fixed Assets-Net	<u>524</u>	<u>694</u>
<b><u>Total Assets</u></b>	<b>5,283</b>	<b>5,341</b>
<b><u>Liabilities and Fund Balances</u></b>		
<b><u>Liabilities</u></b>		
Accounts Payable		
Donors	2,260	1,684
Employees	216	266
Funds In-Trust	302	573
Accruals and Provisions	160	695
Total Liabilities	<u>2,938</u>	<u>3,218</u>
<b><u>Fund Balances</u></b>		
Capital Invested in Fixed Assets		
Center Owned	524	694
Capital Fund	71	(205)
Operating Fund	1,750	1,750
Core Unrestricted Deficit	<u>-0-</u>	<u>(116)</u>
Total Fund Balances	<u>2,345</u>	<u>2,123</u>
<b><u>Total Liabilities &amp; Fund Balances</u></b>	<b>5,283</b>	<b>5,341</b>

**Statement of Activity**  
(as of December 31, 1992, in thousands of U.S. dollars)

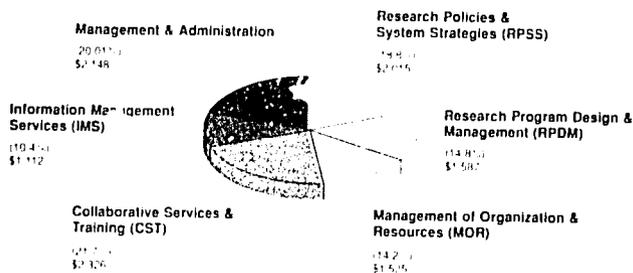
<u>Revenue</u>	<u>Core Unrestricted</u>	<u>Core Restricted</u>	<u>Complementary</u>	<u>TOTAL</u>	<u>Prior Year</u>
Grants	6,518	518	3,578	10,614	9,301
Other Revenues	<u>321</u>	<u>-0-</u>	<u>-0-</u>	<u>321</u>	<u>1,231</u>
<b>Total Revenue</b>	<b>6,839</b>	<b>518</b>	<b>3,578</b>	<b>10,935</b>	<b>10,532</b>
<b><u>Operating Expenses</u></b>					
RPSS Program	832	518	665	2,015	
RPDM Program	1,060	-0-	527	1,587	
MOR Program	1,134	-0-	391	1,525	
Collaborative Services and Training	1,307	-0-	1,019	2,326	
Information Management Services	1,094	-0-	18	1,112	
Management & Administration	<u>1,190</u>	<u>-0-</u>	<u>958</u>	<u>2,148</u>	
<b>Total Operating Expenses</b>	<b>6,617</b>	<b>518</b>	<b>3,578</b>	<b>10,713</b>	<b>11,316</b>
Excess (Deficit) of Revenue over Expenditure	222	-0-	-0-	222	(784)
<b><u>Allocated as follows:</u></b>					
Deficit Previous Year	116			116	(70)
Capital Fund	106			106	-0-
Unexpended	<u>-0-</u>			<u>-0-</u>	<u>(714)</u>
	<b>222</b>			<b>222</b>	<b>(784)</b>

**Operating Expenses****by Object of Expenditure**

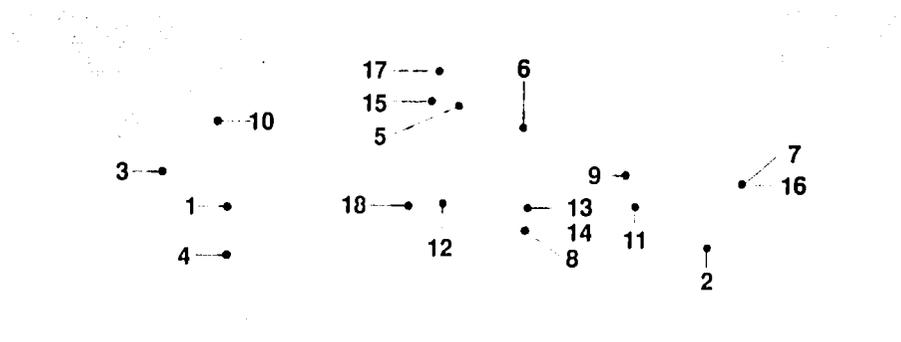
Personnel Costs	4,643	125	1,218	5,986	6,167
Supplies and Services	1,143	182	1,456	2,781	3,267
Operational Travel	540	211	904	1,655	1,580
Depreciation of Fixed Assets	271	-0-	-0-	271	302
Write-off of 1991 Grant	<u>20</u>	<u>-0-</u>	<u>-0-</u>	<u>20</u>	<u>-0-</u>
<b>Total Operating Expenses</b>	<b>6,617</b>	<b>518</b>	<b>3,578</b>	<b>10,713</b>	<b>11,316</b>

ISNAR was reorganized in 1992. As a result, a comparative breakdown by program/service has not been given for the previous year.

### 1992 Operating Expenses by Program/Service



## CGIAR-Supported International Agricultural Research Centers



1. **CIAT** Centro Internacional de Agricultura Tropical, Cali, Colombia
2. **CIFOR** Center for International Forestry Research, Bogor, Indonesia
3. **CIMMYT** Centro Internacional de Mejoramiento de Maíz y Trigo, El Batán, Mexico
4. **CIP** Centro Internacional de la Papa, Lima, Peru
5. **IBPGR** International Board for Plant Genetic Resources, Rome, Italy
6. **ICARDA** International Center for Agricultural Research in the Dry Areas, Aleppo, Syria
7. **ICLARM** International Center for Living Aquatic Resources Management, Manila, Philippines
8. **ICRAF** International Centre for Research in Agroforestry, Nairobi, Kenya
9. **ICRISAT** International Crops Research Institute for the Semi-Arid Tropics, Hyderabad, India
10. **IFPRI** International Food Policy Research Institute, Washington, D.C., U.S.A.
11. **IIMI** International Irrigation Management Institute, Colombo, Sri Lanka
12. **IITA** International Institute of Tropical Agriculture, Ibadan, Nigeria
13. **ILCA** International Livestock Centre for Africa, Addis Ababa, Ethiopia
14. **ILRAD** International Laboratory for Research on Animal Diseases, Nairobi, Kenya
15. **INIBAP** International Network for the Improvement of Banana and Plantain, Montpellier, France
16. **IRRI** International Rice Research Institute, Los Baños, Philippines
17. **ISNAR** International Service for National Agricultural Research, The Hague, The Netherlands
18. **WARDA** West Africa Rice Development Association, Bouaké, Côte d'Ivoire

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