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International Service For National Agricultural Research (ISNAR)

Technical Report to USAID For 1990

Under the terms of our unrestricted core grant agreement for 1990, ISNAR is required to submit an annual program performance report to coincide with the financial reporting period. ISNAR's financial reporting period matches the calendar year and a copy of our audited accounts has been included with this technical report. A more complete description of ISNAR's program for 1990 is provided in our *Annual Report*, a copy of which is also attached.

I. FINANCIAL OVERVIEW

ISNAR's approved core budget request for 1990 was US\$8.5m. Core funds pledged by donors amounted to US\$6.8m, including US\$1.085m from USAID. At the same time, the devaluation of the US dollar relative to the Dutch guilder increased ISNAR's costs considerably during the year. In our funding request the guilder was budgeted at 2.00 per dollar. By December of 1990 the exchange rate stood at 1.70 per dollar. Over 60 percent of core expenses for the year were again incurred in guilders.

Total expenses in the core program amounted to US\$8.2m. ISNAR was able to make up part of the shortfall in core funds pledged by donors through other income such as exchange gains on donor core contributions, charges to special projects or restricted grants, and bank interest. As a result, "earned income" applied to the core program amounted to US\$1.1m in 1990. Fixed assets (equipment) increased by US\$0.1m. Fixed assets and some restricted core activities were financed through unexpended balances brought forward from 1989. It was not possible to increase the working fund as originally budgeted in the medium-term plan. ISNAR closed out the year with a slight deficit of US\$0.05m in unrestricted core funds.

II. ADVISORY SERVICES PROGRAM

The heart of ISNAR's partnership with national systems is our advisory services program. Some 42 percent of expenses incurred in the core program in 1990 were for advisory services. The medium-term plan allocation was 40 percent. One goal set for advisory services in ISNAR's medium-term plan was that we would be working with national systems in 28 countries by 1992. In 1990 we worked with 27 countries and one regional institute. ISNAR collaborated with national systems in four of these countries for the first time: Algeria, Benin, Botswana and Yemen.

During the year and with the help of special project or restricted core funds, staff were outposted to work in the national systems of Bangladesh, Cameroon, Indonesia, Tanzania, and Uganda. We also responded to new requests from governments for assistance through exploratory visits by staff to Angola, Benin, Bhutan, Jamaica, Mozambique, and Sierra Leone. Future collaboration with these and other countries will depend on discussions with research leaders and the resources available to ISNAR.

### System Reviews

ISNAR planned to undertake an average of four system reviews each year. During 1990, ISNAR responded to requests from Bangladesh and Botswana to conduct diagnostic reviews. In cooperation with AOAD, we also assisted national teams in Algeria and Yemen to begin reviews of their research systems. In the case of the latter two countries, it is the national teams who took the lead, with ISNAR providing the methodology and training.

### Planning

In ISNAR's medium-term plan it was expected that the number of diagnostic reviews conducted annually would decline over the five-year period of the plan. This is because diagnostic reviews undertaken earlier often lead to collaboration in the development of research plans to overcome constraints and then to advising on the implementation of these plans. Cooperation with national systems in formulating research plans was an important part of our work in 1990.

In sub-Saharan Africa, ISNAR worked with research leaders in Ghana in developing a framework for producing a national agricultural research plan. ISNAR also assisted the government of Mali in the planning and programming of research for IER, which was formed in 1989 from the two main research institutes and covers forestry, crops, and livestock. In Somalia, we supported a national team in revising and updating their research plan. In Tanzania and Uganda, we assisted both countries in the formulation of national agricultural research plans. Finally, we worked with INERA in Zaire to complete a plan for national agricultural research programs. This activity was carried out in cooperation with CIRAD in France.

In Asia, ISNAR worked with the government of Laos and an Asian Development Bank team in the design of a long-term plan. In the Americas, ISNAR also began work with CARDI on a new 10-year plan for agricultural research in the Caribbean (CARICOM) countries.

In West Asia and North Africa, we worked with INRA in Morocco to redesign its long-term research programs. The process is described in a joint ISNAR-INRA publication, and was the subject of several training workshops in the country. ISNAR also helped a national strategic planning team in Syria to finalize a strategy for agricultural research.

In all, ISNAR collaborated with nine national systems and one regional institute in the preparation of research plans. In our medium-term plan, ISNAR expected to work annually with national systems in four countries in planning or project preparation exercises.

### Collaboration in Implementing Plans

In addition to diagnosis and planning, it was also expected in the medium-term plan that ISNAR would work with some 20 research systems per year in the implementation of plans or in helping to strengthen specific management components. While ISNAR was

heavily involved in 1990 in providing advisory services to support the formulation of research plans, we also worked with 15 national systems in the execution of plans to strengthen agricultural research or to improve particular management components. The activities in each country are described below.

#### Sub-Saharan Africa

Benin - Examined proposals for reorganizing the national system, in preparation for a World Bank and FAO project.

Burkina Faso - Worked with senior research leaders to plan activities for the next several years.

Burundi - Assisted with the design of a programming system and revisions to personnel regulations, advised on criteria for staff evaluation.

Cameroon - Reviewed progress on implementing action plans for IRZ and IRA.

Guinea-Bissau - Worked with DEPA to set research priorities and define programs.

Kenya - Participated in a donor-funded review of the national agricultural research project. Helped design procedures for review research projects and advised on program formulation.

Senegal - Completed a project to assist ISRA in human resources management.

#### Asia

Indonesia - Assisted in establishing a management information system in AARD and in re-establishing its center for research programming.

Philippines - Tested (in two institutes) ISNAR-developed tools to improve human resources management and program budgeting. Collaborated with PCARRD in documenting its experience in monitoring and evaluating its programs.

Sri Lanka - Worked with CARP in developing and testing a program budgeting system and in training staff in its use for 19 research institutes.

#### Latin America

Bolivia - Assisted IBTA and CIAT in the planning and evaluation of research.

Costa Rica - Worked with senior officials on the role of the National Commission of Agricultural Research and Technology Transfer.

Ecuador - Advised on the legal and institutional framework needed to obtain autonomy for INIAP, including changes to structure, organization, planning, and programming.

Uruguay - Advised INIA on policy and strategy, priority setting, structure and organization, and human resources management.

#### North Africa

Sudan - Participated in the mid-term review of ARETP, and provided assistance to the Agricultural Research Corporation.

### III. RESEARCH PROGRAM

Through our research program, ISNAR has continued to generate approaches to meet the specialized needs of national agricultural research systems in developing countries. In 1990, ISNAR devoted 26 percent of expenditure to research on the problems of

policy, organization, and management. Research received an allocation of 25 percent of the budget in the medium-term plan.

### **A Knowledge Base on National Agricultural Research Systems**

Since producing the *Indicator Series* in 1989, ISNAR has continued to collect data on national systems world-wide. The intention is to fill in the gaps wherever possible with data not available when the *Indicator Series* was first published, update information for more recent years, and provide more detailed information on selected countries.

In 1990, we also took a major step forward in the analysis of this data for agricultural R&D policy decisions. The result will be a new policy volume clustered around five themes: research in a policy context (including issues of sustainable agriculture); measuring research and economic development; public-sector research; private-sector research; and emerging policy issues for the 21st century. In our medium-term plan, ISNAR expected that before 1992 we would publish at least one book and a series of analytical papers related to our data base on national agricultural research systems. When published next year, the policy volume will be our second book. As in the case of the *Indicator Series*, Cambridge University Press will be the publisher.

### **Improving Planning Approaches and Management Tools**

Our institutional strategy identifies 12 critical factors in strengthening national systems. Six of these factors were identified as priorities for research in our medium-term plan.

#### **1. Long-term planning, priority-setting, and resource allocation**

Our research on planning has been based on collaboration with institutes in several countries, particularly Morocco and Mali. During the year we produced a working paper on an important component of strategic planning: the design and readjustment of long-term programs.

An important task of top-level research leaders is also to set priorities among proposed programs. In practice, this means accepting and funding some programs, and rejecting or postponing others. Cooperation with Indonesia (AARD) and Australia (ACIAR) has led to the development of a priority-setting approach which takes into account the economic benefits of existing or alternative research programs, including the "spillover" potential of research.

The world-wide trend toward privatization, coupled with government budget cuts in many developing countries, is also redefining the boundaries between public and private sector research. ISNAR launched a project in 1990 to examine where public and private sector research might complement each other, and of alternative sources of funding for research.

#### **2. The structure and organization of national systems**

ISNAR has continued with our study of the organization and structure of national systems from a regional perspective. CIDA provided partial funding. As part of the project, two regional overviews (covering Asia and Arab-speaking countries) were published in ISNAR's Working Paper series in 1990. A total of eight documents

produced on topics related to this critical factor were used as catalysts for discussion at our international agricultural research management workshop held in November.

### **3. Linkages between national systems, the technology transfer process, and users of agricultural technology**

The second phase of ISNAR's four-year study of the links between agricultural research and technology transfer was completed in 1990. The work centered on the analysis of specific issues resulting from case studies in six countries: Costa Rica, Côte d'Ivoire, the Dominican Republic, Nigeria, the Philippines, and Tanzania. A study in Colombia was completed earlier. Seven analytical "discussion papers" were published in 1990. Two more are expected by mid-1991.

ISNAR also continued to synthesize results from our study on the organization and management of on-farm client-oriented research. During the year we published three documents related to the project. The most important of these, *The Technology Triangle*, examines links between research, technology transfer agents, and farmers. This publication is the result of a major 1989 workshop. ISNAR also applied results from our research to assisting the Tanzanian government to strengthen national capacity for farming systems research.

### **4. Program formulation, program budgeting, and management information systems**

ISNAR completed the first phase of development of our Information System for Agricultural Research Managers (INFORM). This brings together information on research activities, personnel, and finances in a single user-friendly system. The purpose is to help managers to better formulate policy, plan, monitor, and evaluate research. Guidelines for managers have been written and two training workshops for Asian managers were held in 1990.

### **5. The monitoring and evaluation of research**

ISNAR conducted research on several fronts to improve service to national systems in monitoring and evaluation. A consultative meeting with Research leaders was held in 1990 on this topic. A global literature review covering more than 1,500 documents on concepts, methods, and experiences in monitoring and evaluation was also undertaken. Conclusions so far reveal that most research evaluations in developing countries deal with donor-funded development projects, and are therefore not as useful for managers trying to improve monitoring and evaluation of research in national systems.

In addition, we worked with local researchers in Bolivia during 1990 to determine the economic rate of return on soybean research and technology transfer work in the country over the past 15 years. ISNAR undertook similar work in Uruguay in 1988. We have now received requests from six other countries for similar assistance.

### **6. Human resource development and management**

ISNAR has been working to synthesize and apply approaches developed through research in this area. For example, in the Philippines ISNAR worked with PCARRD to apply an ISNAR-developed agricultural researcher information system (ARIS) to

improve the management of research personnel. The system is user-friendly and runs on a micro-computer. Advisory services work in many other countries has also benefited.

### Research Studies

ISNAR also recognized in our medium-term plan that special studies would be undertaken on selected topics related to research policy, organization, and management. Some of these studies have been described in relation to our research on management approaches under the critical factors or to the knowledge base on national systems. Other studies included:

#### **Biotechnology issues in developing countries.**

In 1990, the World Bank/ISNAR/Australia project produced two publications. The first is entitled *Beyond Mendel's Garden: Biotechnology in the Service of World Agriculture*. The second is *Agricultural Biotechnology: Opportunities for International Development*. Both were published by CAB International. ISNAR also began work on four complementary studies in Colombia, Indonesia, Kenya, and Zimbabwe on the implications of biotechnology to national systems. The Netherlands has provided partial funding for the studies.

#### **The organization and management of small-country national agricultural research systems.**

The goal of this project is to identify specific problems as well as develop organizational models and management strategies suitable for the research system in small countries. A data base on 50 small countries has been compiled. Cooperating national research leaders worked with ISNAR to complete drafts of four of the seven case studies planned for the project. The seven countries are: Fiji, Honduras, Jamaica, Lesotho, Mauritius, Sierra Leone, and Togo. Regional study papers have also been produced on West Africa and southern Africa. Italy and DANIDA have contributed financial support. Approaches developed by this project have already been applied to training and advisory services.

#### **Agricultural research in China.**

In early 1990, ISNAR began a study of the world's largest research system: that of the People's Republic of China. The project is being carried out in collaboration with the Chinese Academy of Agricultural Sciences and the University of Minnesota. The Rockefeller Foundation is sharing the costs. The study builds on work previously carried out by the main investigator, a U.S.-educated Chinese agricultural economist now based at ISNAR. The study intends to describe Chinese agricultural research, estimate its impact, determine ways of strengthening the national system, and provide a method for setting priorities among alternative research efforts.

## IV. TRAINING PROGRAM

ISNAR has identified three types of activities for the training program in our medium-term plan: training material development, formal events of different types, and informal

one-on-one training. In all 17 percent of expenditure in the core program was for training in 1990. This compares to 15 percent in the medium-term plan.

### Training Material Development

A "Training Series" was launched in 1990 to produce documents which assist ISNAR staff and others in delivering training events on research management topics. The first two documents produced were two training-the-trainer manuals for ISNAR staff. A second component produced in 1990 was a set of 16 documents on human resources management aimed at research managers in southern Africa. These were generated as part of a SADCC/ISNAR agricultural research management training project. Training materials on other topics are under development.

### Organization and Support of Workshops, Seminars, and Training

In our medium-term plan we set as a goal to be sponsoring approximately 19 training events annually by 1990. In 1990, ISNAR collaborated with other organizations to deliver 20 training events and conferences in 13 countries. Most of these were of one to three weeks' duration. Four events were global in scope, four were regional, 11 were national (country-specific), and one involved two countries. In addition, ISNAR contributed to eight training events or conferences organized by other institutions. Participants to conferences, seminars, and workshops totaled 693 men and women, excluding ISNAR staff.

In Africa, most events have been undertaken through two projects: the SADCC/ISNAR agricultural research management training project (southern Africa, funding from CIDA, ODA, and USAID); and the KARI/ISNAR agricultural research management training project (Kenya, funding from the EEC). Two workshops in Asia on management information systems were carried out as part of regional project to strengthen agricultural research management financed in part by the Asian Development Bank.

What follows is a list of training workshops, conferences, and other meetings which ISNAR either organized alone, conducted jointly with other organizations, or contributed to by providing resource people.

#### Sub-Saharan Africa

- Workshop on the reorganization of KARI (Kenya, KARI/ISNAR)
- Workshop on scientific writing and presentation (Kenya, KARI/ISNAR)
- Annual scientific conference (Kenya, KARI/ISNAR)
- Review of the national maize research program (Kenya, KARI/ISNAR)
- Workshop on the formulation of guidelines in preparation of a research work plan (Zambia, MOA/SACCAR/ISNAR)
- Integration of management at INERA (Burkina Faso)
- Workshop on the management of change in DR&SS (Zimbabwe, DR&SS/SACCAR/ISNAR)
- Workshop on managing change in DAR (Malawi, DAR/SACCAR/ISNAR)
- IAR strategic planning workshop (Ethiopia)
- SADCC/ISNAR workshop on human resource development (Mozambique and Angola)
- Workshop on research-extension linkages (Mali, IER/ISNAR)
- Fifth FGCR Agricultural Research Management Course (participation in FAO/CIRAD course)

### Asia

- Agricultural research management training seminar (Hebei Province, People's Republic of China)
- International workshop on management information systems for agricultural research (regional event for China and South Asia, ISNAR/NAARM)
- International workshop on management information systems for agricultural research (regional event for Southeast Asia, ISNAR/SEARCA)

### Latin America and the Caribbean

- FAO/ISNAR/IICA/INIAP workshop on strategic planning and management of agricultural research (regional event for L. America)
- Economic evaluation of agricultural research (Bolivia, participation in two conferences at CIAT)
- CARDI/FAO/IICA/ISNAR workshop on strategic planning for small-country research systems (regional event for the Caribbean)
- Workshop on monitoring and evaluation (Bolivia, CIAT)

### West Asia and North Africa

- Workshops to prepare the local study teams to implement a diagnostic review of the research (two held, one for a team in Algeria and another for Yemen)

### Global

- Issues and methodology for the analysis of research in small countries (at ISNAR)
- Research management workshop (ISNAR contributed to ICRA course at Wageningen, Netherlands)
- Agricultural research policy, organization, and management for sustainable agriculture (consultative meeting at ISNAR)
- International agricultural research management workshop (at ISNAR)
- Research management workshop for African graduate students (ISNAR contribution to an IDRC/U of Manitoba event)
- Monitoring and evaluation of agricultural research (at ISNAR).

Many research leaders from developing countries also visited ISNAR for one-on-one training and discussions with staff. Such training was normally undertaken in relation to advisory services to particular national systems. For example, research managers from Mali and Morocco visited ISNAR to learn more about planning and program formulation. The visits reinforced advisory services to both countries.

## V. PROGRAM SUPPORT SERVICES

The publications unit produced over 50 ISNAR publications in 1990 and our mailing list stood at 4,200 names. In addition to editing, designing, and supervising the printing of ISNAR publications, our staff produced four issues of ISNAR's newsletter during the year. The ISNAR library collection increased by some 4,000 documents to a total of 14,500 in 1990. During the year, the ISNAR library also coordinated a joint effort by 18 international centers to identify at least one depository library for their publications in each developing country. Libraries in 100 countries participated.