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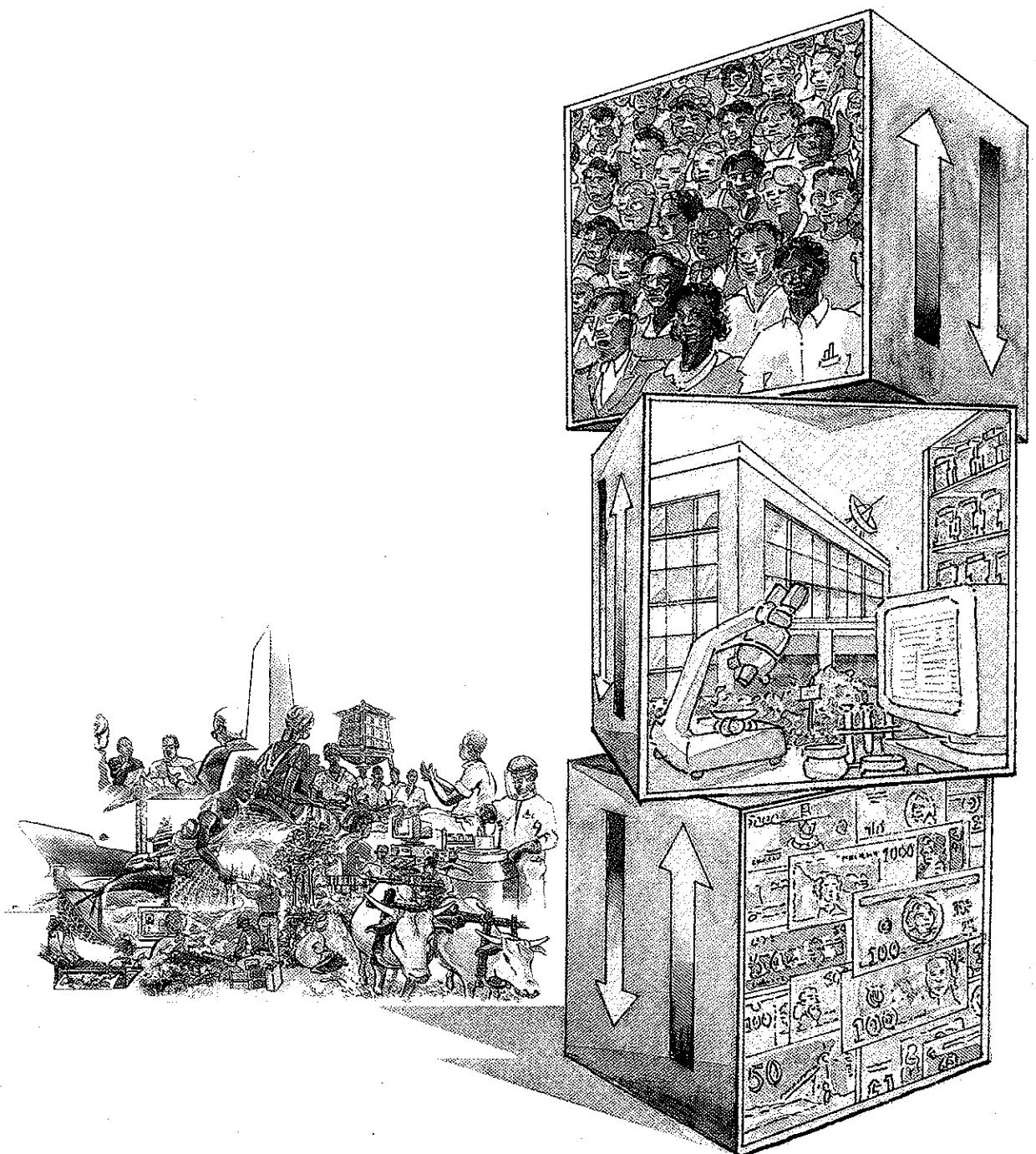
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**ISNAR**

Annual Report

1999

Creating ownership of agricultural knowledge through capacity building





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## Highlights

A pilot survey confirmed that **globalization is transforming the agricultural sector in developing countries** and, with it, the way national agricultural research organizations (NAROs) go about their business. Most of the NAROs surveyed have embraced the global information system and now have e-mail connectivity as well as fast, affordable access to on-line journals and scientific papers via the Internet.

After two years of direct ISNAR support, **the NARS Secretariat is now preparing to carry on its work independently**. By pooling knowledge and resources, the secretariat provides a means of strengthening the collective voice of NARS in the emerging global agricultural research system.

**ISNAR published its first training module CD-ROM in 1999**, thus reducing considerably the costs of disseminating its packages of training materials for use and adaptation by developing-country trainers and training departments.

A partnership approach for projects involving countries with very different levels of internal capacity proved its value in an initiative to build agro-industrial research management capacity in six Latin American countries. The project also **widened the scope of ISNAR's work through its emphasis on the complete value-added chain**, rather than on primary production processes only (the growing of crops and raising of animals).

To mark its 20 years of service to national agricultural research, ISNAR sponsored a **series of radio features giving developing-country collaborators a chance to air their views** on the value of agricultural research and collaboration with ISNAR.

Research leaders in developing countries are **gearing up for a more active role in conserving the Earth's precious genetic resources**. Such resources are scientists' building blocks for breeding new traits in plant varieties. Their continuing availability is crucial to the future success of agricultural research.

The **ISNAR Global Associates program is up and running with seven professionals already on the register**, and another seven to be added in early 2000. The first ISNAR Associates delivered training in Burkina Faso, Swaziland, Madagascar, and Zambia; participated in country missions to Nicaragua; and represented ISNAR at international meetings in Kenya and Brazil.

# Message from the Board Chair and Director General

ISNAR's role is to assist in the empowerment of national agricultural research systems (the NARS) of developing countries, to help them take charge of their own research in their own countries. Together with other international agricultural research centers and the Global Forum on Agricultural Research, ISNAR also helps NARS establish and maintain an active interface with the international scientific community, to influence the global research agenda and benefit from its findings. ISNAR's strict focus on building NARS' capacities, their effectiveness, and powers of innovation makes it unique within the Consultative Group on International Agricultural Research (CGIAR). For ISNAR, NARS' success is our success; their institutional problems are challenges to our research-based services.

Developing countries need international research in order to harvest the results of scientific endeavors. ISNAR has therefore strongly supported the Global Forum and continued throughout 1999 to invest significantly in the Forum's "NARS Secretariat." The Secretariat is one important mechanism by which developing countries can influence the international agricultural research agenda and exchange information on research successes and failures (see box on page 5).

## A small institution with one of the CGIAR's largest mandates

ISNAR is a small institution working towards one of the CGIAR's largest mandates: to ensure that national agricultural research is well organized and sustainable in developing countries. In Africa the countries themselves are responsible for almost 90% of total investments in agricultural research; the CGIAR contributes only just above 10%. Globally the figures are estimated at 96% and 4% respectively. These investments in agricultural research and development remain vital because the agricultural challenge remains immense—for food security, for employment, for health, and for the social and cultural fabric of countries. ISNAR works to ensure that both national and international investments in agricultural research give the highest returns possible through well-organized, efficient national agricultural research institutions both in the public and private sectors.

In 1999 countries that ISNAR assisted with the immense challenges facing their agricultural sectors included Mozambique, Vietnam, the Palestinian National Authority, and Georgia. ISNAR also benefited from working with more established research institutions in Cyprus, Sri Lanka, Venezuela, and South Africa that were re-examining their structures and programs, as well as with countries such as Uganda, which are early leaders in the process of institutional change and development.

## Two decades of service to national agricultural research

This year ISNAR looked back on 20 years of activities in support of developing-country NARS. During this period the concept of the "national agricultural research system" changed. The increased roles of the private sector and nongovernmental institutions in civic life and the weakening role of the state have also been reflected in agricultural research. ISNAR's concern is that the private sector, increasingly powerful economically and scientifically, might serve only people with purchasing power in the poor countries. The institutions that matter most for the poor are also those under greatest threat from the new economic order. It is by no means certain that free-market forces will work in agricultural research to the benefit of the poor of developing countries. Recall that the scientific basis for the immensely successful agriculture in industrialized countries was largely constructed by the public sector and paid for by public, not private money.

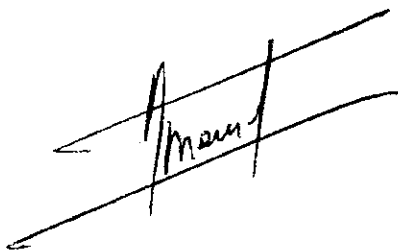
Developing-country spokespersons articulated their views on the challenges facing developing-country agriculture and agricultural research in interviews that were broadcast in English, French, and Spanish by radio stations all over the world around ISNAR's 20th anniversary in October 1999 (see box page 31). The programs were heard in many develop-

ing countries and some excerpts were aired on the BBC World Service. Millions of listeners, particularly in developing countries, could hear their own agricultural scientists review the local farming world. If you would like to tune into the programs and have an Internet connection and a loudspeaker on your PC, go to ISNAR's website at [www.cgiar.org/isnar](http://www.cgiar.org/isnar), then click on "radio programs." You can also order an audio cassette by mail from ISNAR. This was ISNAR's birthday gift to its NARS clients for 20 years of partnership in support of national agricultural research agendas.

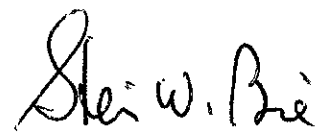
## **Building a worldwide network of support for NARS**

Most of ISNAR's financial support comes from development assistance programs of industrialized countries and, increasingly, from developing countries' own agricultural research funds. We are pleased to note that the number of developing countries investing their research moneys with ISNAR continued to increase in 1999. Some, such as China, significantly increased their contribution. Industrialized countries remain the largest contributors, and this year we and our developing-country partners owe special gratitude to the United Kingdom, the Netherlands, and Sweden for their increased support.

It is disturbing to note, however, that despite ISNAR's wide and central mandate, financial backing for fulfilling that mandate remains variable. Internal reorganization in the European Commission led to nonpayment of its anticipated 1999 grant to ISNAR (and other CGIAR centers), and this essentially exhausted our operational reserves as we delivered fully on the 1999 program as contracted with our partners. It drove us deeply into the red in 1999. For 2000, ISNAR adjusted its program to new funding realities. We believe our now smaller and more focused program can be carried out by a smaller number of staff. Cuts in staff numbers also reinforced the importance of the Global Associates program (box page 23). Seven global associates were recruited in 1999. These part-time staff are drawn from a pool of highly experienced developing-country scientists. Associates continue to work within their own national institutions while serving with ISNAR on an as-needed basis. As such, ISNAR remains poised to make strategic contributions to the global agricultural research community, as both developing-country NARS and the CGIAR will revisit their tasks and organizational structures in the new millennium.



Moise Christophe Mensah  
*Chairperson, Board of Trustees*



Stein W. Bie  
*Director General*

## GFAR "Global Forum" fosters emergence of global agricultural research systems ■



**T**he Global Forum on Agricultural Research (GFAR) is working to increase synergy among the various stakeholders in the agricultural research community worldwide, helping them in their efforts to alleviate poverty, increase food security, and promote the sustainable use of natural resources. Establishment of the forum in 1996 and its continuing operations provide an example of how the idea of "empowerment" can work in practice in agricultural research for development, because GFAR was established by the stakeholders it seeks to mobilize: developing-country agricultural research systems, advanced research institutions, regional and subregional organizations, universities, nongovernmental organizations, farmers' organizations, the private sector, international agricultural research centers, and the donor community.

The need to strengthen collaboration among actors working in areas of agricultural research and research management in developing countries and to increase NARS' participation in setting the international agricultural research agenda are important dimensions of Global Forum activities. The "NARS Secretariat," established in mid-1998, contributes to work in these dimensions. Based in Rome at the Food and Agriculture Organization of the United Nations (FAO), the NARS Secretariat strengthens the collective voice of the NARS community in the Global Forum.

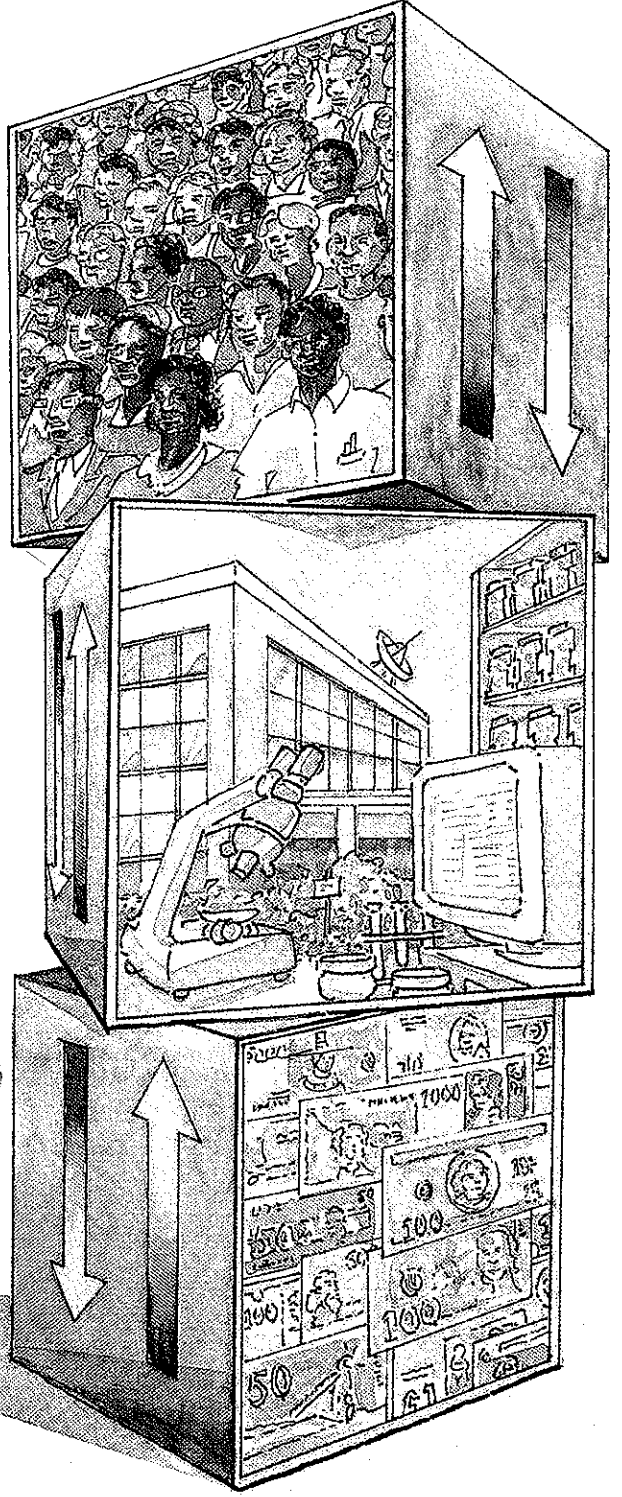
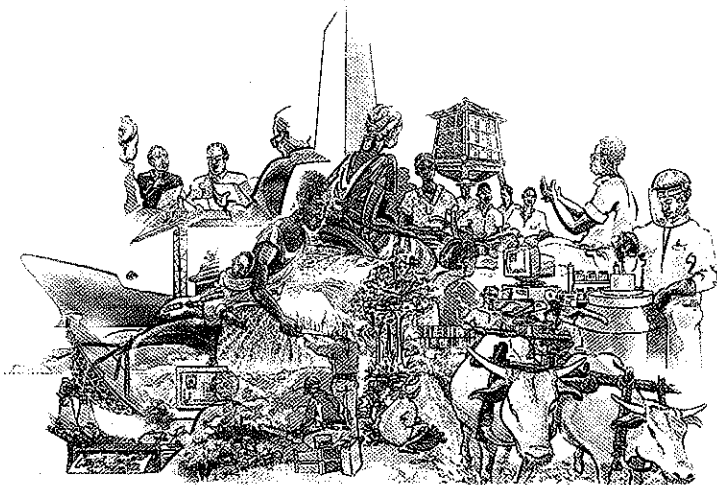
ISNAR was instrumental in facilitating the establishment of the NARS Secretariat and strengthened its capacity by seconding a senior officer for a two-year start-up period. In its first 18 months, the Secretariat supported regional and subregional agricultural research fora in the Asia-Pacific, Central Asia and the Caucasus, Latin America and the Caribbean, sub-Saharan Africa, and West Asia and North Africa. Among its priorities, it launched initiatives in information and communication technologies, for example, assisting in formulating regional agricultural information systems as key components of an Electronic Global Forum on Agricultural Research (EGFAR). The Secretariat is promoting innovative research partnerships in natural resource management and for some global commodity chains. It is also assisting in formulating a global strategic research agenda, which will focus initially on plant genetic resource management. More information on the NARS Secretariat and GFAR is posted on the Internet at [www.egfar.org](http://www.egfar.org).

### ISNAR Board of Trustees, 1999

*Seated from left to right:* Alessandro Bozzini, Just Faaland, Amir Muhammed, Martín Piñeiro, Janice Reid.  
*Standing from left to right:* Jacques Ekebil (FAO observer), Helen Hambly Odame (Secretary to the Board), Stein Bie, Maria Nieves Roldan Confesor, Moïse Mensah, Sami Sunna, Ken-Ichi Hayashi, Geoffrey C. Mrema, Niels Röling.  
*Not pictured:* Douglas D. Hedley







# Creating Ownership of Agricultural Knowledge through Capacity Building

Capacity building is not only about strengthening skills in specialized areas of science. It is also about improving research management, the way science is planned and implemented. It is about enabling interdisciplinarity and bringing new tools of participatory science to bear in the work and mindset of agricultural researchers everywhere. It is about building the skills to create ownership of agricultural knowledge in developing countries' national agricultural research systems (NARS). This annual report looks at agricultural research capacity building through the lens of ISNAR's work to strengthen NARS in developing countries. It focuses on two distinct levels of capacity building: first the level of the individual researcher or research manager and second the organizational level.

Defined in this way, the capacity of public-sector agricultural research to serve the poor, and often even better-off, farmers has eroded over the past decade in many developing countries. Agriculture seems to have fallen in importance on political agendas, as concerns have mounted about the effects of agriculture on natural resources and the environment, and attention has been drawn to the quickening pace of technological change and new global trade regimes. Yet for developing countries, the challenges to their agricultural sectors and their agricultural science systems are as compelling now as they were 20 years ago when ISNAR was established. New technology and global connectivity have made the potential for achieving food security, economic prosperity, and alleviation of poverty greater today than ever before. To use that potential to benefit their populations, developing countries must have strong capacity to access and use knowledge.

Although most developing countries have achieved substantial increases in numbers of well-qualified agricultural scientists in recent years, training in organizing and managing

research has lagged behind. Moreover, the way science is practiced is changing throughout the world. For example, rural development is now more integrated, with ministries of tourism and environment having as much to say about agricultural development as the ministries of agriculture themselves. That means developing countries' agricultural research organizations, many of which are publicly supported, must broaden their focus and hone the skills of their scientific and managerial staff in multidisciplinary work.

Technological change, too, has occurred so fast that even top-notch basic training received at a university 10 years ago is likely to be outdated. Without access to strong in-service training programs, agricultural scientists inevitably will be less prepared to select among the many technological options now available, such as new seeds, tissue culture, biological control methods, and embryo transfer techniques. New discoveries have not, however, brought us away from knowledge that is "old" or "traditional." They have also renewed interest in and appreciation for roots of wisdom, such as indigenous knowledge. As this marriage of the advanced with the traditional brings forth new knowledge systems, developing countries, as well as advanced nations, are exploring new institutional frameworks: ways of operating for which few scientists have been adequately trained.

In 1999, as ISNAR marked its 20th anniversary of strengthening NARS, capacity building—in agricultural research and in other areas—remains a major priority of regional organizations, developing countries, and their allies in donor and development agencies. The rise of "capacity building" can be attributed in part to the growing realization that developing countries themselves must take the driver's seat in all efforts to alleviate poverty and food insecurity within their borders and the world.

## What is capacity building?

"Capacity" can be seen as the ability of an individual or organization to function well and achieve aims. Thus, initiatives to "build" or "strengthen"

capacity enable people or organizations to identify and solve problems by themselves. Although capacity building bears some resemblance to tra-

ditional—and more general—notions of development, there is a major difference in emphasis. Whereas “development” is usually understood to mean changes in structures, capacity building is a means of engendering learning either in individuals or in organizations, which then leads to improvements in behavior and performance. In agricultural research, capacity building therefore includes programs that enable researchers to improve their individual job performance, as well as efforts to improve operations of the research organization as a whole.

Capacity, ideally, is cumulative. Skills in anticipating and solving problems and responding to opportunities presented by the changing environment continue to grow as they are reinforced by both success and failure, with decreasing need for additional external assistance. Because of the central role played by individuals and organizations in developing their capacities, the effects of capacity-building programs are best gauged by changes in behavior and performance, rather than by the “adoption” or “impact” of a new technology or service.

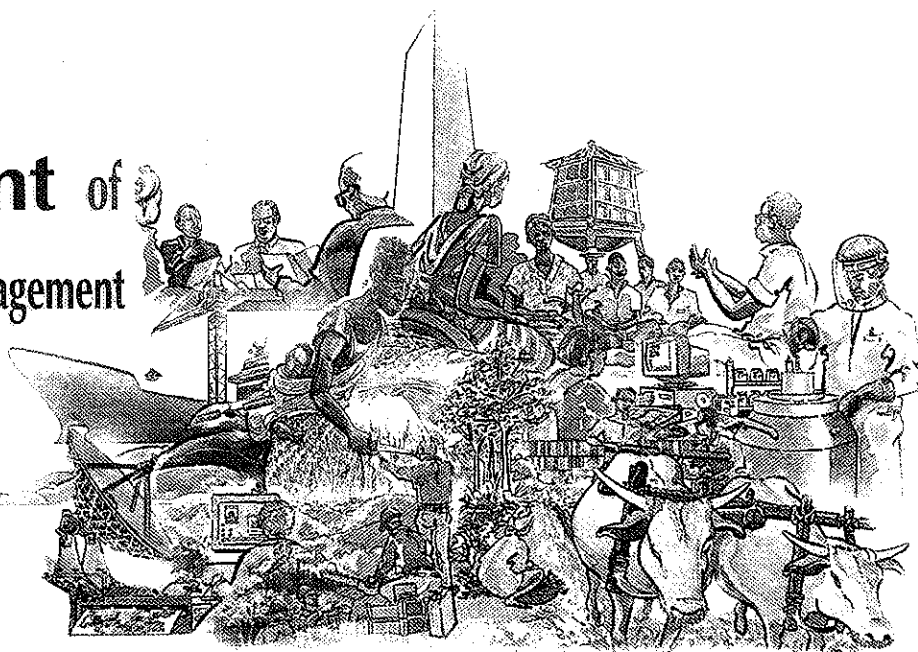
A look at spending on agricultural research underscores the important role played by devel-

oping countries in public-sector agricultural research. Some very large countries support agricultural research systems much more extensively than does the international public sector, as represented by the 16 research centers of the Consultative Group on International Agricultural Research (CGIAR). By the early 1990s, China, Brazil, and India together already spent several times more on agricultural research than the CGIAR. About 90% of agricultural research funds spent in sub-Saharan Africa belong to the countries of the region. The CGIAR’s expenditure is just over 10% of the total expenditure of the region. Although the CGIAR remains a strategic actor in international agricultural research at the global level, its budget represents less than 4% of the world’s research spending.

Developing countries’ large share in the global agricultural research system, along with the importance of agriculture in the economies of most low- and middle-income countries, underscore their need for strong, sustainable agricultural research systems. Furthermore, the use of technological improvements and the scale of complementary investments by the private sector are greater when a nation itself has a strong public-sector agricultural research system.

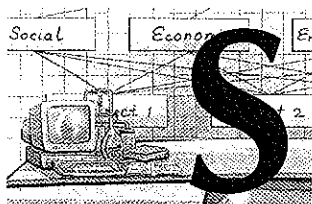
## Assessment of

- organization management
- research output
- research impact



# Strategic planning

## Strategic planning remains key in national agricultural research capacity ■



Strategic planning remains a key element of organizational capacity in agricultural research institutions. Strengthening such planning, through intensive collaborative efforts, is the thrust of much of ISNAR's advisory work.

ISNAR assisted the **Palestinian National Authority** in an effort to build national capacity in agricultural policy formulation and research planning, jointly with the United Nations Development Programme (UNDP). The project, which began in 1998, helped the Authority formulate its first policy on

agricultural research and created an effective core team for continued decision making and leadership. In addition, the project contributed to the preparation of a medium-term plan for agricultural research and extension. The policy, strategy, and plans were formally presented to government and stakeholders in October 1999.

In **Eritrea** ISNAR worked with national staff to formulate a project to strengthen agricultural research in the government sector. The project, funded by FAO and the Government of Italy's Cooperative Program, focused on improving agricultural research planning and management. ISNAR also helped prepare a mechanism for analyzing research program activities in relation to donor and government investments.

In **Mozambique** ISNAR assisted with the preparation of an agricultural research strategy and plan for four research institutes operated by the Ministry of Agriculture and Fisheries. This activity was part of a larger effort to articulate an agricultural development program for Mozambique initiated in 1994 and financed by the World Bank. ISNAR also assisted in designing a national council to improve the coordination, organization, and management of agricultural research. The next challenge being tackled is an update of the research strategy and the formulation of demand-based agricultural research programs.

In **Cyprus** ISNAR helped set up an organizational performance assessment system for the national agricultural research institute and assisted national staff in recommending ways to improve performance in several areas of management.

In all these countries, agricultural research capacity was strengthened not only through innovative methods in planning and evaluation, but also through the involvement of national staff in the process. In the words of ISNAR Senior Research Officer Warren Peterson, "The involvement of national staff is a process of 'learning by doing' and we consider it an important aspect of our work."

## Guiding values and challenges

Three guiding values underlie ISNAR's work to help developing countries build their agricultural research capacity: participation, learning by doing, and respect for diversity. The first two require that collaborating individuals and institutions be full-fledged partners in designing, implementing, and evaluating projects aimed to strengthen their capacity. To achieve this, ISNAR uses elements of "participatory action research," in which people experiencing a problem participate as "subjects" with "researchers" in deciding together where to focus data collection and analysis and in taking action to manage, improve, or solve the problem at hand. Regarding diversity, rather than attempting to develop and introduce general solutions that "fit" all individuals or orga-

nizations, ISNAR attempts to understand and build on the diversity of knowledge and experience already present in agricultural research organizations throughout the developing world, and to work with local managers to develop locally adapted solutions to the managerial problems they face.

One characteristic of capacity building is that if it is successful, clients become independent, identifying and implementing their own priorities and objectives. That represents a strong challenge for an organization like ISNAR to measure its own effectiveness in terms of a particular set of goals or institutional values. ISNAR directs its research and outreach to NARS that are concerned mainly

# Agroindustry

## Partnership provides great value for agroindustry



A partnership approach developed by ISNAR for projects involving countries with very different levels of internal capacity proved its value in a recent initiative to build agroindustrial research management capacity in six Latin American countries. The project also widened the scope of ISNAR's capacity-building work through its emphasis on the complete value-added chain, rather than on primary production processes only (the growing of crops and raising of animals).

Agroindustry is the sector that stores, processes, and markets agricultural products in a form and manner best suited to consumer demand. In many low-income countries, as in most middle-income ones, agroindustry's share of national income is comparable to the share of primary agricultural production, and growing faster.

Argentina, Brazil, Chile, Colombia, Mexico, and Venezuela were the countries involved in the project, which was supported by national agricultural research institutes, the Inter-American Development Bank (IDB), and the Dutch government. Argentina, Brazil, and Chile worked on the strategic, programmatic, and operational planning of agroindustrial research. Colombia, Mexico, and Venezuela, focused on similar issues, but with more emphasis on integrating environmental concerns into their research programs. The project produced and disseminated a series of management tools by means of eight research reports, two training manuals, training courses, a high-level policy seminar, and a Website.

Partners in the project operated on the basis of equality, rejecting any notion of some being more or less advanced than others. Intensive interaction was maintained through electronic communication as well as face-to-face meetings. All these elements strengthened the collaboration, increasing the project's effectiveness and reach. Working from within, the target organizations overcame many diffusion barriers and enabled the participating countries to develop better management solutions with a perspective wider than a national one. Even nonparticipating countries obtained access to new sources of institutional support. Results continue to benefit not only the six countries that participated directly, but also others because local versions of the methodologies are being used throughout Latin America and the Caribbean.

if  
capacity building  
is  
successful,  
clients become  
independent

with improving the well-being of the poorest segments of farmers. If ISNAR has contributed usefully, then a NARS it has worked with will take on renewed initiative, choosing its own strategies for addressing these needs. That ability to make choices and be proactive in working towards explicit objectives is evidence of its strengthened capacity.

Certain fields are particularly fertile for capacity development. These are the areas in which the rapid developments of the 1990s are requiring responses from developing countries' agricultural support services. Globalization, with its increased emphasis on trade and agroindustrial transformation, is one. Another is the development of user-based governance models that bring democracy within public-sector research organizations. A third is benefiting from new tools in biotechnology and information

# Globalization

## Study confirms globalization's impact on agricultural research



pilot survey conducted by ISNAR in 1999 confirmed that globalization is transforming the agricultural sector in developing countries and, with it, the way national agricultural research organizations (NAROs) are going about their business. Twenty agricultural research organizations in 12 countries collaborated in the survey, which was part of an ISNAR project to investigate the impact of globalization on agricultural R&D strategies in the developing world. The survey was one input to an international expert consultation on

globalization in September 1999, which proposed topics for future research on the process and impact of globalization in the agricultural sector.

For the purposes of the survey, an "agricultural research organization" was defined as an institute working on a specific commodity or topic – for example, China's Tobacco Research Institute – while a "NARO" was defined as a national, umbrella-type organization that encompasses a broad range of topics – such as the Kenya Agricultural Research Institute.

The survey found that most NAROs can now access information more affordably and faster through the Internet. Not only has the electronic highway enabled researchers and managers to connect with colleagues via e-mail, but it also has given them on-line access to scientific papers and journals and direct contact with a host of organizations worldwide. Nonetheless, access to the new medium is often on a shared basis: in sub-Saharan Africa only one in five staff had an individual Internet connection, and in Jordan only one in 10.

Moreover, research organizations are slowly reorienting their work toward new areas and topics, such as genetic modification and natural resource management, according to the survey. Private research institutes also seem to be growing in importance: 65% of the national agricultural research leaders surveyed observed increased agricultural R&D in private and semi-public institutes.

Finally, many organizations had experienced considerable change in staffing and funding in recent years. Generally, the number of staff has decreased. Sources of funding for the most part continue to be government or international donors, and there seems to be little cooperation with the private sector. A follow-up survey using a larger sample will be conducted in 2000.

technology. Finally, ensuring that agriculture uses land, water, and air wisely is becoming a necessary condition for sustainable development and growth of trade.

Internal organizational features of a strong national agricultural research capacity are efficient organization, good governance, clear priorities linked to resource use, high staff motivation, and fruitful interaction with farmers and other external stakeholders. But to achieve such capacity requires, at the level of individual scientists and managers, specific skills in policy, organization, and management. Building these skills through training—and bolstering research institutes' own ability to perpetuate such skill transfer—is therefore a pillar of ISNAR's capacity-building work.

to achieve capacity  
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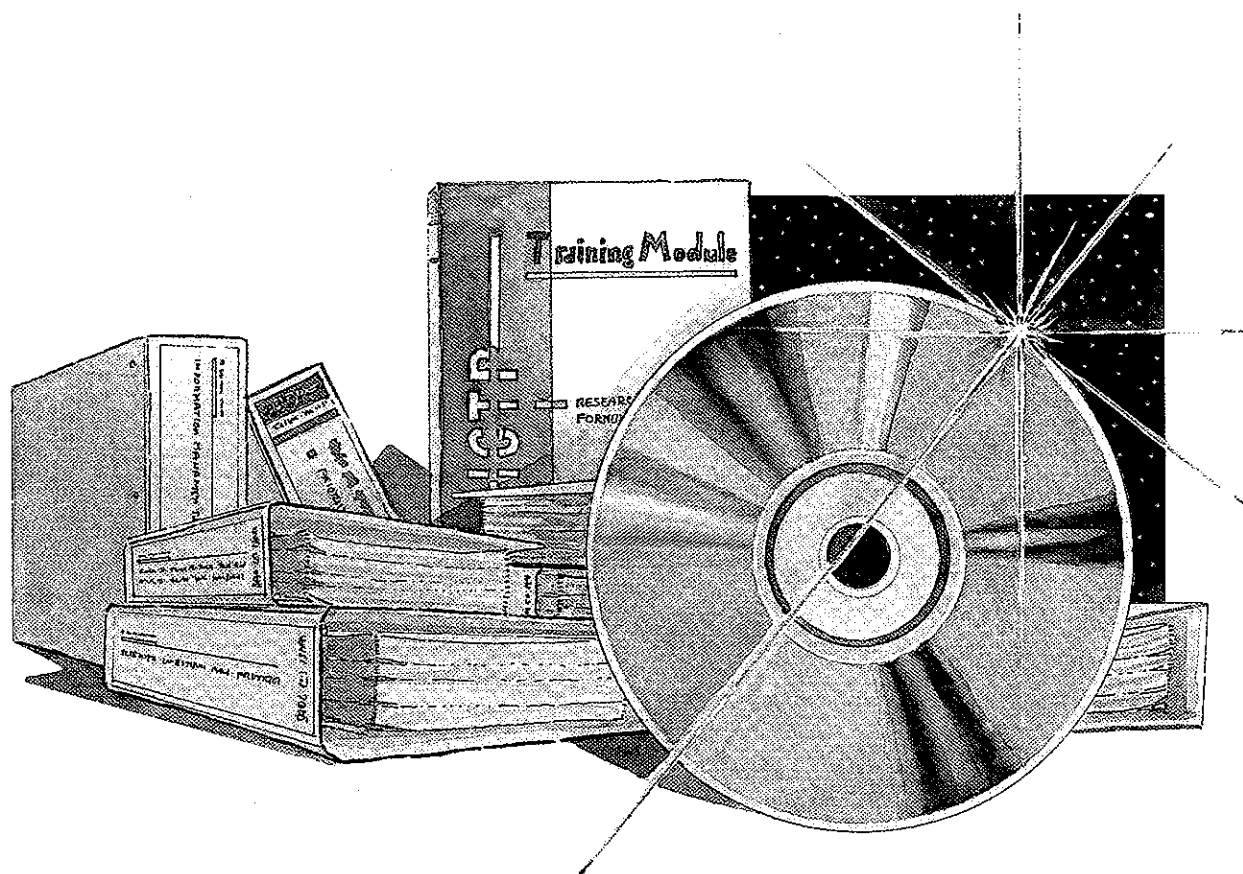
## Capacity building in individuals: training researchers and managers

In-service training remains a preferred venue for capacity building among agricultural research institutes in the developing world. Soaring numbers of requests for training, particularly in newly emerging areas of research management, led ISNAR to intensify its efforts to assist these institutes in strengthening their capacity to provide in-service professional development opportunities. In so doing, ISNAR also consolidated its expertise in delivering research management training into a number of ready-to-use, widely adaptable packages of training materials. These "modules" are designed for workshops and training courses ranging from two days to two weeks. They focus on a range of skills that ISNAR together with its developing-country partners identified as essential for effective agricultural research management. A few examples are priority setting, information management, research program formulation, gender analysis, and writing a convincing research proposal (see the box on the facing page).

Understanding the adult learner is critical to the success of ISNAR's training approach, which is based on experiential learning theory for maximum capacity-building effect. ISNAR modules

offer learners continual opportunities to scrutinize their own needs and reflect on the relevance of the concepts they are learning to their own jobs and lives. Occasions for self-directed learning—time to practice new approaches and relate them to personal experiences—and opportunities to discuss with others are also part of the training approach. Such interactive communication, with both trainers and fellow learners, is vastly different from classical education's one-way, teacher-to-student communication. It is tailored to the professional development needs of managers and other mid- and upper-level professionals. These more experienced learners come to training events already possessing a wealth of experience and skills to apply. They benefit from repeatedly reassessing the question, "Where am I now and where do I want to go?"

ISNAR develops its training modules so they can be adapted and used independently by trainers working in agricultural research and training institutes worldwide. Each module provides trainers with materials such as a curriculum, daily learning objectives, descriptions of the training approach and group facilitation techniques, and master copies of handouts,



## CD-ROM

### ISNAR training modules now available on CD-ROM



Training modules are bulky because they have to provide all the information a trainer is likely to need, in a step-by-step way. Each can be 700 pages long and weigh as much as five kilograms. The modules may keep the muscles in tone, but they are awkward to carry around and expensive to produce and mail. Now ISNAR is implementing a strategy to increase the dissemination of its modules with reduced hassle and cost: it is publishing its most popular training module titles on CD-ROM.

The format has several advantages. First, it eliminates bulk and weight. ISNAR's first "training CD-ROM" was produced in 1999 and contains the entire contents of 10 modules on a disk with a diameter of 12 cm and weighing only 10 grams. Add the box and the weight rises to 80 grams—equivalent to about 28 A4 sheets of paper. The result is lower mailing costs. Second, the CD-ROM is cheaper to produce than printed copies. This makes it easier for NARS to purchase the modules. The 10 modules, which cost US \$1500 in the printed version, can now be bought by a developing-country NARS for \$100.

Using the CD-ROM as a basis, trainers can directly adapt and print as many copies of the relevant modules as they need. Their compactness and low cost also make them ideal for distance training programs. A CD-ROM is also more versatile than printed modules. Overheads can be projected directly onto the screen or be printed on transparencies for projection.

ISNAR's first CD-ROM contains the following modules:

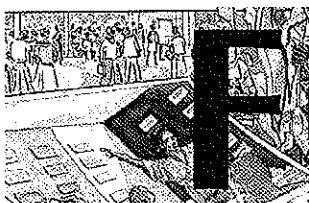
- framework and methodology on TNA and organizational constraints assessment in Kenya
- priority setting
- planning, monitoring, and evaluation of research projects
- scientific writing and presentation
- research program formulation
- strategic planning
- gender analysis
- research program formulation
- the research project management cycle: planning, monitoring, and evaluation
- financial management.

worksheets, and other training media. For a nominal fee, trainers and training departments can order printed versions of the modules. Ten complete modules are available on CD-ROM, and these plus others are downloadable directly from the Internet.

The modules fit into ISNAR's broader strategy of grooming local cadres of highly trained and experienced research management trainers based within agricultural research institutes in the developing world. In so doing, ISNAR takes a long-term view: many of the trainers who began their association with ISNAR as long as 10 years ago continue to refine and update their skills via continuing training programs. Moreover, by using and adapting the modules, they avail themselves of lessons learned and experience gleaned by their developing-country colleagues as well as by ISNAR.

understanding <sup>the</sup>  
adult learner  
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**ISNAR's**  
training  
approach





or ISNAR one indicator of success in training is the increasing ability of developing countries to conduct training workshops and courses on their own, using local resources and accessing external expertise when needed. That is why ISNAR emphasizes training of trainers in its training program. ISNAR's approach in this regard has particularly been successful in Africa, where training is now often given by regional professionals whose training skills were honed and extended at ISNAR training-for-trainers courses. The case of Dr.

Robert Kariuki Obura is typical of this process.

Obura, a professor at the Department of Agronomy and Soil Science at Egerton University, Njoro, Kenya, is the Director of Crop Management Research Training. Involving CIMMYT, Egerton University, and the Kenya Agricultural Research Institute (KARI), this project is a regional training effort for sub-Saharan Africa. Obura's history of collaboration with ISNAR began 11 years ago when he and ISNAR were involved in a European Union project to train Kenyan scientists in scientific writing and oral presentation.

Over the years, Obura has become part of a network of research management trainers active in eastern and southern Africa, developing his own skills as well as those of his colleagues. In 1995, he joined ISNAR's headquarters-based training team for 10 weeks, collaborating intensively with them to finalize eight training modules for use in developing countries throughout the world. In May 1999, he was appointed an ISNAR Global Associate.

Based on his years of experience as an ISNAR consultant, Obura has no doubts that ISNAR courses and training modules meet the requirements of agricultural research management in Africa. "I have personally talked to various directors of NARS and they all have positive remarks about ISNAR training and the style of training plus the quality of training materials that we use," he says. "Follow-up with participants using the Participant Action Plan Approach also shows that the participants have actually transferred their new skills to the workplace." Now Obura is extending his training expertise outside the region to other developing countries such as Mauritius, where he conducted training courses in scientific writing, oral presentation, and project proposal writing in 1998 and 1999.

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## Special focus on Africa

In addition to making its modules available to research institutes, nongovernmental organizations, and other educational establishments, ISNAR has spearheaded a long-term, intensive program of agricultural research management training in sub-Saharan Africa. During 1996–1999, 46% of ISNAR training events were held in Africa, 30% in Latin America and the Caribbean, 16% in Europe, and 8% in Asia. A successfully concluded eight-year program to strengthen southern Africa's training capacity, conducted in partnership with the Southern Africa Development Community (SADC) and the Eastern and Southern Africa Management Institute (ESAMI), helped establish or strengthen training units in some 20 agricultural research and training institu-

tions within the region. Most of these training departments continue to base the research management components of their in-service training on materials they developed in collaboration with ISNAR.

Further, 1999 was ISNAR's fourth year of involvement in another international initiative to build capacity, through training, among African research managers. This program, called the "IARC/NARS Training Group" ("IARC" meaning international agricultural research centers), is jointly led by the CGIAR, other international agricultural research centers, and developing-country agricultural research leaders, each of whom takes a hand in identifying the skills most

vital for the region's agricultural researchers and managers. Participants in the program, 30% of whom are women, build skills in four key areas of research management: leadership, financial management, research program formulation, and planning, monitoring, and evaluating research projects.

The IARC/NARS Training Group now trains more research program leaders in research management than any other training program on the African continent. More important, follow-up has confirmed that participants are putting the skills they acquired to good use. Gambian participants, for example, are implementing a participatory priority-setting process. Nigerian participants applied techniques they learned for client evaluation in research program formulation. In Burkina Faso, managers are using approaches they learned in formulating research programs for INERA, the country's main public-sector agricultural research institute.

Supported by the African Development Bank, ISNAR is now embarking on a new training initiative that brings together its strength in providing management training to African research leaders with its focus on building the capacity of training departments in agricultural research organizations. This project encompasses an extensive pro-

gram of strengthening the training units of scientific organizations in 10 West African countries.

In step with technological progress, distance learning is now coming of age in ISNAR's training work. In 1999, ISNAR's distance learning program in management information systems proved effective, involving participants from six countries in Asia and Africa. ISNAR's second on-line training event will begin in mid-2000: a refresher course to broaden and update the skills of sub-Saharan African trainers who were initially trained three years ago through ISNAR's training-of-trainers program.

Further, ISNAR perceives a growing need among NARS for training in emerging areas of agricultural research policy and management, such as responding to the research challenges and opportunities presented by changes in international trade regimes, making the most of new information technologies for research, and managing biotechnology. In 1999, genetic resources figured prominently as an emerging field. ISNAR took the lead in assisting developing countries in assessing their training needs in genetic resource conservation, in collaboration with the International Plant Genetic Resources Institute (IPGRI) and other partners in the CGIAR's System-wide Genetic Resources Program (SGRP).



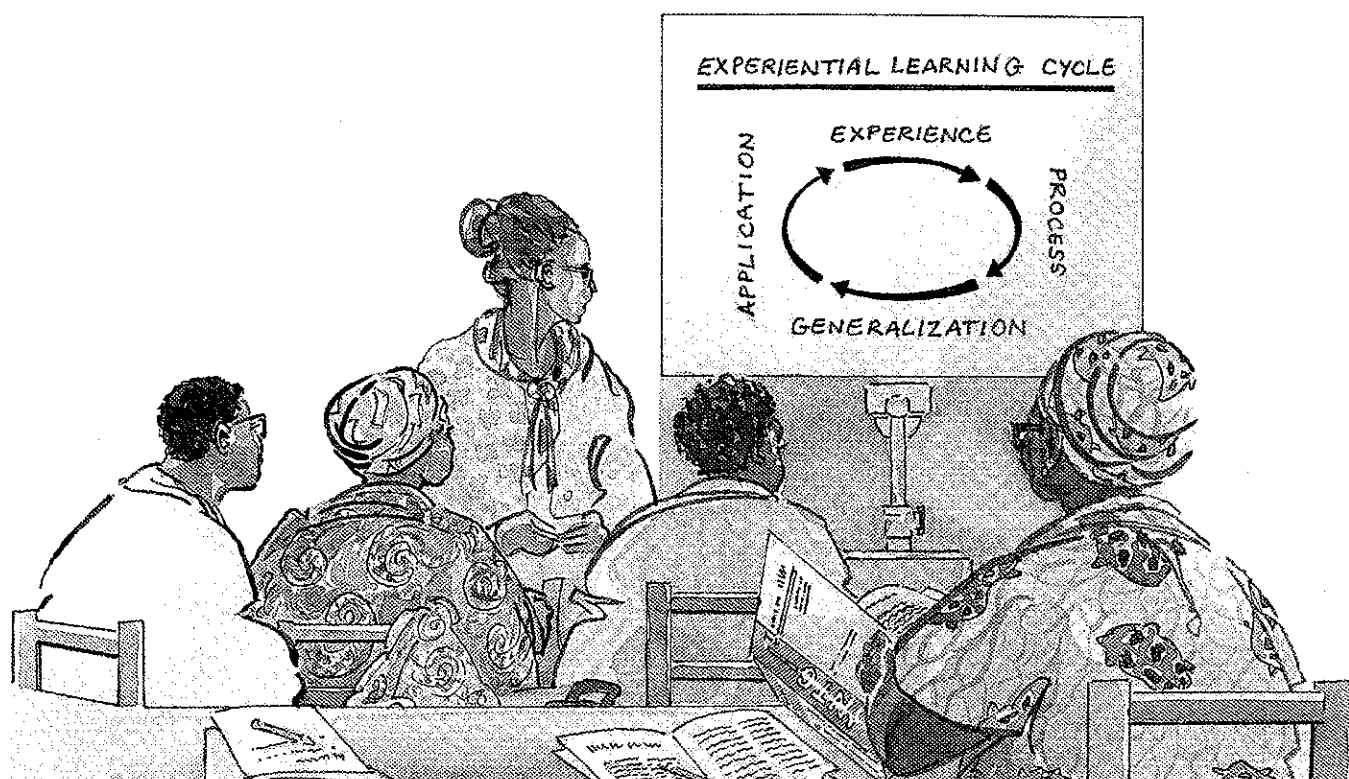
## Institutional capacity building through organizational learning

Beyond training, ISNAR's research and advisory work also have strong elements of capacity building, placing emphasis at the organizational level rather than at the level of the individual. By "organizational capacity," ISNAR refers not only to the abilities of individual staff, but also to the organization's structure, management processes, and external linkages. At both the individual and organizational levels, capacity building can be said to revolve around processes of learning. Individuals' learning is relatively easier to validate: it can be confirmed by observing if and how newly gained knowledge is applied or behavior is modified. Organizational learning is more complex.

The concept of the "learning organization" became popular in the early 1990s when social scientists used the term to describe an organizational style or culture that stimulates thinking, problem solving, and creativity among staff. Workers are themselves stimulated to learn, increasing their knowledge through training, net-

working, and other means of professional development. But organizations that learn go one step further. They implement policies and structures that encourage, even require, sharing of knowledge. They reward listening and stimulate asking questions. As such, these organizations have in place means of amplifying and making common goods of the knowledge and experience garnered individually by each and every staff member. Here the strength of the learning organization becomes evident.

The ability of organizations to learn—that is, to consolidate and apply their collective knowledge—is particularly important in fast moving, turbulent environments and industries. It is this characteristic that prompted ISNAR to apply elements of the learning cycle in its work to strengthen agricultural research institutes in the developing world. Today's context of fast technological innovation and expanding social, economic, and political relations has made "learning to learn" an organizational imperative in agricultural research.





A collaborative group dedicated to improving training in agricultural research and research management is maintaining its lead in building African capacity for research that contributes to poverty reduction. The group, called the "IARC/NARS Training Group," now trains more African research program leaders in key areas of agricultural research management (ARMT) than any other program on the continent. Moreover, evaluation of the group's annual Agricultural Research Management Training (ARMT) shows that participants are using new management tools they learned to improve their organizations' performance after returning to their jobs. Forty percent of participants are also able to recreate various types of informal and formal management training in their organizations.

There has also been a significant change in funding of participants. In 1996, all participants were supported by international agricultural research centers, but by 1999 some 60% were financed by developing countries and their regional associations. Women's participation reached 30% in 1999. In Africa, women currently comprise less than 1% of top research managers. They are therefore a priority group for such management training.

The purpose of the training group is to share resources, establish common procedures for training, and eliminate unnecessary duplication of training efforts. Among its achievements are shared databases to keep track of professionals in the region, training events, training materials, and training facilities, as well as an Internet site for sub-Saharan Africa.

The IARC/NARS Training Group grew out of a CGIAR initiative begun in the late 1980s in response to a growing demand for training in developing-country agricultural research institutions. It took off in sub-Saharan Africa, thanks to the efforts of training staff at three CGIAR centers: the International Institute of Tropical Agriculture (Nigeria), the International Centre for Research in Agroforestry (Kenya), and the West Africa Rice Development Association (Côte d'Ivoire). Later, in response to the growing capacity and interest of regional associations, universities, and other national research organizations, the program was reformulated as the IARC/NARS Training Group. It now has 45 members.

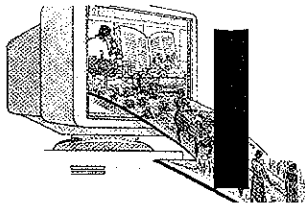
## Building organizational capacity through a cycle of learning: A case study

An ISNAR project that has made explicit use of the concept of learning to build organizational capacity is an intensive capacity-building effort spanning much of the past decade and involving more than 25 agricultural research institutions and regional organizations in Latin America and the Caribbean. The aim of the initiative, to strengthen planning, monitoring, and evaluation (PM&E) in the institutes, incorporated a cyclical process of planning, doing, reflecting, and appraising similar to the cycle of learning. The project also rigorously applied the guiding values of participation, learning by doing, and respect for diversity in its design.

The Latin American "PM&E project," which, like many ISNAR capacity-building initiatives, integrated aspects of research, training, and advisory

service, proved timely from its start. In the early 1990s, when the project was getting underway, few of the managers involved anticipated the magnitude of the transformation that their organizations would experience in the coming years. Most thought the problems they were experiencing—mainly budgetary restrictions—were transitory or could be solved by reducing costs. Many believed that calls for improved governance and accountability would pass with time and hoped to weather the storm by improving public awareness and cutting costs rather than by making fundamental changes in their organization's goals, strategies, or modes of operation.

Exposure to the PM&E project, however, led these managers to view organizational change in a positive light and become active implementers



India is a country with a vast rural population and, consequently, an extensive agricultural research network. Yet for scientists working in the most outlying areas, there is a limit to the reach of conventional training through workshops and courses organized at central locations. Add the additional constraint of resource scarcity, and the result is a dire need for professional development programs that are cheap to implement and yet extensive in coverage.

In this context ISNAR became involved in a research project to develop tools for providing agricultural research management training at a distance in India's outlying areas. ISNAR conducted the work along with three partners: the Indian National Academy of Agricultural Research Management (NAARM), the External Programme of Wye College in the United Kingdom, and Canada's Commonwealth of Learning.

The research findings, soon to be published at NAARM, essentially recommended a "softer" technological approach to distance learning, using collaborative learning to compensate for the lack of interactivity of information and communication technologies. Technological limitations is the major constraint shaping this recommendation. According to ISNAR researcher Nicole Brunet, who managed the project and was its principal investigator, communication constraints are a severe problem. Fewer than 10% of the research stations in the system are linked to a computer network and phone. Fax and e-mail facilities are likewise severely restricted. Only half the stations have computers. "We have to have a down-to-earth strategy," she observed. "Later, as resources improve, we can put greater emphasis on sophisticated technology."

The proposed distance training packages for the upcoming four-month pilot program rely heavily on print-based materials, but also include audio and video cassettes. The learning materials will be sent through the mail and there will be a support system of monthly face-to-face contact sessions with NAARM facilitators as well as weekly phone/fax interaction. E-mail will be used when possible for contact between facilitators and training participants. The applied research strategy for distance learning proposed for NAARM is being examined before its implementation.



of it. An evaluation study done using an innovative technique of structured interviews with ISNAR's partners showed that the project made major contributions to the knowledge and ability of participating individuals to plan, monitor, and evaluate agricultural research. Its most significant results were in the realm of motivation. By gaining and exchanging experience within the region and developing and implementing new management systems, research leaders became more aware of the need for change within their own organization.

Managers also gained appreciation for how improved management systems could help strengthen organizational capacity. They began to see the integrated cycle of planning, monitoring and evaluation as an essential tool for organizational learning: that is, for keeping abreast of external trends, identifying needs and opportunities, developing appropriate strategies, and continually improving upon the strategies, structures and managerial processes already in place.

the project **led**  
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organizational  
**change** in a  
**positive light**



Research leaders in developing countries are gearing up for a more active role in conserving the Earth's precious genetic resources. Such resources are scientists' building blocks for breeding new traits in plant varieties, such as larger fruit yield or disease resistance. Their continuing availability is crucial to the future success of agricultural research. Indeed, with the world's genetic diversity disappearing fast, scientists everywhere are becoming more aware of the need to strengthen capacity for conservation and management of genetic

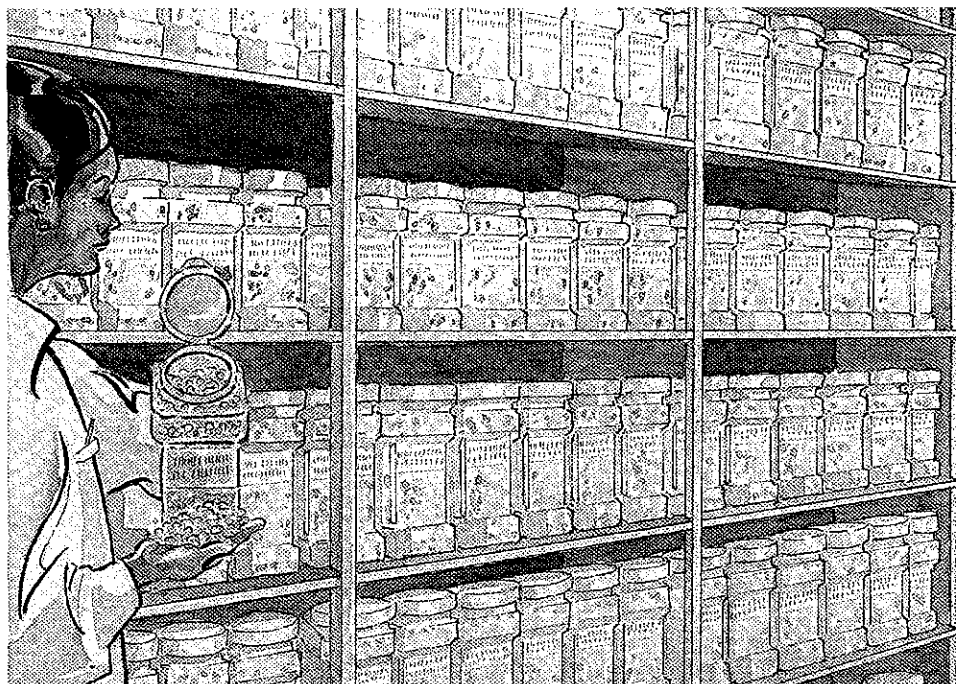
resources. That awareness is particularly strong in developing countries, where a forecasted 7 billion of the world's 8.5 billion population will live by 2025.

It is in this context that the CGIAR System-wide Genetic Resources Program (SGRP) launched a project to promote opportunities for managers and scientists to develop their capacity for policy development, leadership, and management in genetic resources for food and agriculture. The project is being implemented on behalf of the CGIAR by ISNAR and the International Plant Genetic Resources Institute (IPGRI).

The first two phases of the project, a survey to identify policy and management training resources, and an assessment of training needs and organizational constraints in 121 developing countries, were completed in 1999. Some 200 managers and scientists in sub-Saharan Africa, Asia, Latin America and the Caribbean, central and western Asia, and north Africa participated. Respondents were asked to identify their responsibilities and activities and organizational constraints affecting their performance on the job. They were also asked to rank their priorities for professional development and training.

Survey results, which are set for publication in 2000, revealed the strengths and weaknesses of current training courses and some regional differences in the priorities and responsibilities of program leaders. Commenting on the findings, Joel Cohen, Chairperson of the SGRP, said, "The TNA identified some important gaps in training for managers of food and agricultural genetic resource programs. They need to be addressed to meet threats to biodiversity on the one hand, and budgetary squeezes on the other."

The project is to continue through 2001, first with production of training modules on policy development for genetic resources and later, covering topics related to leadership and management.



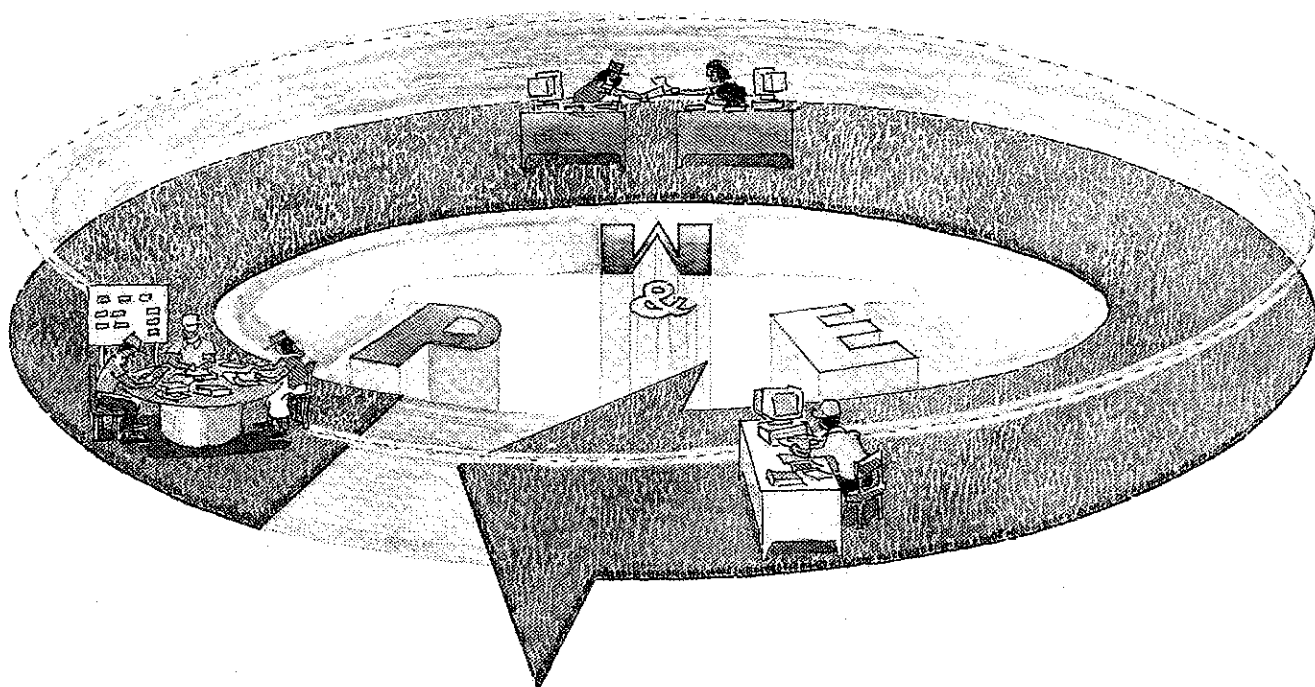
## Creating an enabling environment

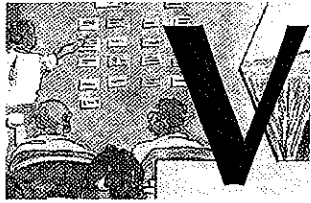
Beyond these contributions to individual motivation and capacity, at the organizational level major improvements in planning, monitoring, and evaluating agricultural research were achieved in only a few institutions. This more modest success at the organizational level reconfirms that certain conditions—many related to the degree of institutions' ownership of the project and their change process—are necessary for capacity building at this level:

- The *environment* must be conducive to change.
- Top managers within the institute must provide *leadership* and astute management of any process of change.
- A *critical mass* of staff members must be involved and committed to the change process.
- Appropriate *institutional innovations*—in this case, strengthened planning, monitoring, and evaluation systems—must be developed.
- *Resources* must be specifically allocated, including dedicated time of key staff and budgets for training and facilitation.

Building on the experiences of the PM&E project, a new networking initiative is now emerging among Latin American agricultural science and technology organizations. Aptly named the "New Paradigm", that project is working to build a constituency for innovation in research management among a variety of research entities in the region, including public-sector agricultural research institutions, regional organizations and networks, universities, and others. This new effort focuses on fostering institutional commitment through participation and on strategic management of institutional change.

Where the PM&E project was successful, that is, where improved management systems were implemented and sustained and where fundamental change can be said to have occurred – for example, at SINCITA in Cuba, IDIAP in Panama, and FONAIAP in Venezuela – ISNAR witnessed the organizations themselves gaining momentum, eventually taking on part of the lead in project activities with ISNAR remaining in a catalytic, supporting role. These successes, placed in the context of the project and ISNAR's experience in agricultural research organizations in other parts of the world, led ISNAR to distill five general lessons for designing and managing capacity-building programs.





Valuable lessons about how to design and implement capacity-building initiatives were derived from an intensive evaluation of a six-year ISNAR project to strengthen planning, monitoring, and evaluation (PM&E) of agricultural research in Latin America and the Caribbean. Results of the evaluation underscored the fact that sustainable, large-scale change in PM&E can be brought about only by the organizations themselves, often with external assistance. Such wholesale change cannot, however, be imposed by

an external agency such as ISNAR. In several cases the project did contribute to successful change by providing information, training and advice or by supporting or facilitating organizational change processes where they were already getting underway.

The project increased managers' awareness of the need for organizational change, improved their knowledge and skills in PM&E, and developed the region's training capacity by training trainers. At the organizational level, significant improvements in project formulation and management were registered in organizations where the project succeeded in motivating key managers and stimulating the organizations to dedicate essential resources to the change processes.

General lessons learned included the importance of

- facilitating the processes of change instead of limiting capacity-building activities to providing inputs
- focusing on organizations that are committed to change
- adapting to the needs and circumstances of the organizations supported by a project.

In addition, the evaluation emphasized the value of an integrated PM&E system instead of planning, monitoring, and evaluation being viewed as three discrete management or control functions. It pointed out the crucial role of intended beneficiaries in designing capacity-development programs; the importance of recognizing that many factors contribute to success; and the need for capacity-development programs to articulate and test their underlying theories and assumptions.

## Lessons in capacity building

First, in capacity building the idea of "collaborators" or "partners" must replace the notion of "intended beneficiaries" or "target populations." ISNAR's training approach, as well as its experience with the PM&E project, illustrate both the value and feasibility of this approach. Input of trainers and managers from the region contribute to the relevance of activities, as well as enhancing local ownership of projects and their results. This, in turn, strengthens collaborators' commitment to implementing organizational changes and new management systems and in sustaining their use.

Second, capacity-building is most likely to succeed in organizations that are committed to change. This is particularly important for regional projects, which, like the PM&E project, are envisioned to reach out to agricultural research institutions throughout a wide geographic area. In the PM&E project, only a few of

the partner organizations in the end proved seriously committed to improving their management practices. Since top-level commitment and leadership are essential for large-scale organizational change, it might have been more effective to concentrate resources on those organizations demonstrating a strong commitment to change, and to tailor project activities to those organizations' needs and circumstances, while looking for ways to help build such commitment elsewhere.

Third, capacity building needs to go beyond providing inputs, to actually facilitating processes of change. Capacity building in the past often focused on providing physical, financial, or human resources or on providing new information or tools. Yet the key to capacity development is not the provision of information or resources, but the use of such inputs in solving problems and changing institutional procedures. In other



## New paradigm

Project uses "new paradigm" to build strategic management capacity ■



Building capacity to strategically manage institutional change and innovation is the crux of a new networking initiative that is emerging among Latin American agricultural science and technology organizations. The project, aptly known as the "New Paradigm" project is unique in that it was designed and is being implemented by research leaders in the region with ISNAR support.

Since its launch in January 1999, the project has established a strong presence by initiating collaborative and information-exchange activities and organizing regional workshops to build managerial skills and prepare training materials. An international group of research leaders from the region is now conducting and benefiting from project activities, along with two professionals from Europe and the USA.

The project is negotiating a proposal for training trainers at the hemispheric, regional, and national levels with the Hemispheric System of Agricultural Education (SIHDEA). Through its involvement with SIHDEA, the project is delivering its compelling message on a new mode of knowledge production and the changing roles of agricultural research and extension in the academia of the 21<sup>st</sup> Century.

At the national level, three pilot cases were identified for collaboration in building strategic management capacity. A regional workshop was organized in Costa Rica to train institutional change teams from the three organizations: the National System for Innovation in Agricultural Science and Technology (SINCITA, Cuba), the National Fund for Agricultural Research (FONAIAP, Venezuela), and the Community Forestry Development Project (DFC, Ecuador). One week after the regional workshop, SINCITA held its first national training workshop to train facilitators for its 17 agricultural research organizations. The Ecuadorian and Venezuelan pilot cases also plan to organize national training workshops in 2000.

Simultaneously, at the invitation of the Vice-Minister of Agriculture, "New Paradigm" Project Manager José de Souza addressed the National Committee for Economic Agricultural Enterprises on management training. An outcome of the ensuing discussion was that the Committee decided to make 2000 "The Year of Management Training," the activities of which will include workshops and conferences.

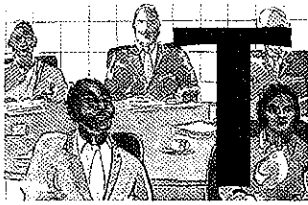


**top-level  
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change**

words, problem-solving capacities are best built through experiential learning rather than by simple transfer of resources or tools.

Fourth, **capacity-building programs should be adapted to the organizations they support**, not vice versa. Too often, such programs are viewed from the perspective of an external intervention: a project or program with defined objectives, resources and deadlines. Yet this is unrealistic. Pace and direction of organizational changes are influenced by a multitude of factors. Effective capacity-building interventions may catalyze or support change processes, but they cannot lead them. They therefore need built-in flexibility to adapt to the ever-changing circumstances of the partner organizations.

Finally, **integrating and institutionalizing planning, monitoring, and evaluation is crucial for promoting individual and organizational learning.**



The ISNAR Global Associates program is up and running with seven professionals already on the register. They delivered training in Burkina Faso, Swaziland, Madagascar, and Zambia; participated in a country mission to Nicaragua; and represented ISNAR at international meetings in Kenya and Brazil.

The Global Associates program is committed to building South-South collaboration in institution building for agricultural research and integrating ISNAR's activities in the field with its headquarters-based programs. The program is establishing a network of outstanding professionals mostly in developing regions to work for ISNAR on a part-time, as-needed basis. Through these part-time staff, also known as "ISNAR Associates," the program promotes ISNAR's three strategic objectives: to strengthen ISNAR's presence in developing regions, to build capacity in NARS, and to deliver affordable support to NARS.

The first ISNAR Associates are from Brazil, Burkina Faso, Kenya, Peru, and Zimbabwe. Another seven professionals are scheduled to be added in early 2000. ISNAR intends to build a gender and regional balance as the number of Associates grows.

Summing up the role of the Global Associates, Program Director Hunt Hobbs said, "ISNAR Global Associates is about more for less: more service for less cost, faster delivery of a broader range of expertise with less travel time and expense." And, he added, "it's all done with brain-gain: developing-country nationals are gaining experience and expertise that they can then use to strengthen their own organizations."

The cyclical progression of planning activities, checking progress, evaluating results, and implementing changes is vital for promoting learning and continuous improvement of internal processes and performance. There are no blueprints for capacity building. Each organization must therefore learn from its own experiences, while

gleaning valuable advice and ideas from neighbors. Strong planning, monitoring, and evaluation systems, as well as effective in-service training programs, can play pivotal roles in this process of learning and improving efforts over time.

## Bringing the lessons to bear on future work

Through its work to strengthen agricultural research capacity in the developing regions, ISNAR has found the concept of "capacity building" loaded with meaning and guidance for its work. In addition to embracing the idea of empowerment, whereby individuals and organizations take charge of their own destiny, capacity building requires that leadership and decision-making power lie with the developing country collaborators with whom ISNAR works. Further, emphasis on capacity building puts an end to the notion of "transferring" management skills or tools or policies from an external assistance agency where they were developed to a "beneficiary," be that an individual or organization. To be truly of use, skills and tools have to be generated or adapted by the individuals and organiza-

tions who are destined to be the end-users, perhaps with the assistance of an external agency like ISNAR. Indeed, empowerment flows from such capacity to generate, adapt, and use knowledge.

In summing up, we can say, first, that aid is wasteful when it attempts to "transfer" technologies to beneficiaries in a developing country without major efforts to build capacity in the recipient country. Second, to be sustainable, development assistance must focus on individual and organizational capacities rather than on facilities and equipment. Third, aid should create autonomy rather than dependence. Capacity building is creating autonomy.

# ISNAR activities in 1999

Region/ Countries	Activities and Outputs	Donors/ collaborators
<b>1. Globalization: Analyzing forces, processes, and options for NARS</b>		
Global	<p>Completed literature review.</p> <p>Analyzed results of pilot survey of NARS to examine impact of globalization on agricultural research. (Participating institutes came from Brazil, Cameroon, Chile, China, Ghana, India, Indonesia, Jordan, Kenya, Malaysia, Nigeria, Zambia, Zimbabwe.) Detailed country reports on impact of globalization on agricultural R&amp;D of Cameroon, Ghana, India, Jordan, Kenya, and Nigeria produced by locally commissioned researchers from each country.</p> <p>Held expert consultation on globalization in The Hague. (Participants came from Australia, Brazil, China, EU, France, Germany, India, Kenya, Malaysia, Mexico, Netherlands, Nigeria, Romania, Switzerland, UK, USA.)</p> <p>Produced outline for book on impact of globalization on agricultural sector and public agricultural research in developing countries.</p> <p>Produced paper on intellectual property rights and NAROs in developing countries, as contribution to AAEA conference, Berlin, August 2000.</p> <p>Contributed paper "Targeting agricultural R&amp;D for poverty reduction: General principles and an illustration for sub-Saharan Africa" to international workshop on "Assessing the impact of agricultural research on poverty" held at CIAT.</p>	<p>Japan, DGIS/NEDA, DFID <i>plus support from participating countries</i></p>
<b>2. Informing agricultural research policymakers about trends in research: Agricultural science and technology indicators (ASTI)</b>		
Global	Improved user access to information on ASTI project through ISNAR's Website, including posting all statistical briefs produced by the project.	Japan, IFPRI, CARDI, CEDAF
Caribbean	Completed Caribbean ASTI survey and drafted overview reports.	CARDI, CEDAF, IFPRI
<b>3. Integrating agroindustrial and environmental demands in agricultural research for the 21<sup>st</sup> century</b>		
Latin American and Caribbean	Produced six research reports based on case-study findings (from Phase 1 of project). Developed management tools for improving integration of agroindustrial and environmental demands and helped establish a regional network of experts in this area. Published proceedings of international seminar (held November 1998). Held consolidation workshop in Mexico to support development of regional systems.	BMZ, PROCISUR, PROCIANDINO, CIAT <i>NAROs of participating countries</i>
<b>4. Enhancing the governance and accountability of NAROs and NARS</b>		
Global	Conducted studies to develop conceptual framework on governance and accountability.	World Bank, GTZ, DFID
Sri Lanka	Carried out case study on governance of research. Produced report on governance component in CARP review.	GTZ, DFID, CARP
Uganda	Reviewed current governance systems of NARO, resulting in recommendations to NARO management. Followed up implementation of recommendations.	World Bank, GTZ, DFID, NARO

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World Bank (IBRD)

5. Building capacity for the strategic management of institutional change in agricultural science and technology organizations in Latin America		
Latin American and Caribbean	The "New Paradigm" project carried out preparatory country missions and training events to sensitize and provide almost 900 managers and planners in LAC with skills in strategic management and management of change. Developed collaborative activities with new organizations. Produced training modules, designed two research projects, and completed first draft of book on causes of institutional vulnerability. (Collaborating institutions include Universidad Nacional, Universidad de Costa Rica, FAO FTTP Project [all in Costa Rica]; Universidad Central de Venezuela, Fundación CIARA [Venezuela], Fundación PROINPA/CIP [Bolivia], Programa Nacional de la PAPA/CIP [Ecuador], CEDAF [Dominican Republic], SINCITA [Cuba].)	SDC, DGIS/NEDA collaborating institutions
Sub-Saharan Africa	Developed the framework and methodology for a study on institutional change and impact in the NAROs of the Sahel region. Conducted case studies in Burkina Faso, the Gambia, Mali, and Senegal.	USAID, Uganda
6. Assessment of the impact of capacity building in agricultural research management		
Global	Produced special edition of journal <i>Knowledge, Technology, &amp; Policy</i> titled "Evaluation in Developing Countries: Experiences with Agricultural Research and Development."	Danida, DGIS/NEDA, IDRC, SIDA
Latin America and Caribbean	Completed last of 16 evaluation reports in project "Evaluation of capacity development in agricultural research management." Prepared two research reports, to be published in 2000.	SDC, ACIAR, IFAD, Danida, DGIS/NEDA, IDRC, Concordia University, World Bank, SINCITA, IDIAP, FONAIAP
West Asia / North Africa	Refined and improved tools and drafted guidelines for conducting self-assessment of management processes. Presented guidelines at AARINENA executive committee meeting.	AARINENA, FAO, ICARDA, KISR, Iran
Cyprus	Assisted ARI in self-evaluation of performance. Presented resulting evaluation report to ARI's stakeholders.	ARI
Uganda	Continued assistance to NARO working group to develop and implement process of institutional performance assessment. Conducted evaluation of governance and management systems and research. Produced evaluation report with recommendations. Provided hands-on training in methodology and approaches for evaluation of institutional performance.	World Bank, NARO
7. ISNAR's Biotechnology Service (IBS)		
Global	Conducted surveys on biotechnology research in Indonesia, Kenya, Mexico, and Zimbabwe. Developed guidelines, tools, frameworks, and training courses for policymakers and research managers, including regional policy seminar held in Philippines for managers from four Asian countries. Did case studies on biosafety in Egypt and Argentina. Conducted surveys on intellectual property rights in selected NAROs in Latin America and Caribbean. Provided targeted in-country advisory services. Strengthened strategic alliances between national and international partners.	CGIAR, Japan, IRRI/IPGRI/SGRP, Crawford Foundation, DGIS/NEDA, SDC, DFID
	Produced several publications, including <i>Managing Agricultural Biotechnology: Addressing Research Program Needs and Policy Implications</i> , published by CAB International.	
	<b>Central Advisory Service (CAS) on Proprietary Technology</b> established at ISNAR to provide information to CGIAR centers on intellectual property, to assist centers in coordinating and implementing invention identification and reporting, and to provide advice on use of proprietary technologies. Position established for a senior research officer in intellectual property rights to assume duties in 2000. International steering committee established. (Participants: CGIAR centers; BTG Int'l Ltd., Queen Mary IPR Inst., Innotech, and Plant Bioscience [all UK]; EPO [NL], John Innes Centre, UPOV [Switzerland], KEPHIS [Kenya], Stanford Univ. [USA], and private consultants.	CGIAR Finance Committee

"ISNAR's Board of Trustees and Management thank  
all core donors for contributing to the projects and activities listed here . . . .

<b>8. Information and communication for agricultural research organizations</b>		
Global	Developed proposal for efficient centralized record-processing and -management system to serve ISNAR's internal information needs and as model for NARS and IARCs. Planned and prepared implementation of new IT infrastructure to increase internal efficiency and serve as model in advisory work.	
Asia	Organized and conducted regional workshops in Malaysia and Thailand to increase awareness of and involvement in information development and related aspects for 50 senior policymakers in Asia.	APAARI, APAFRI, CABI, JIRCAS/ Government of Japan, UPM, AIT
China	Supported CAAS in search for donor funding to develop an information strategy for the NARS of China. Activity planned for 2000.	CAAS, CABI
<b>9. Agricultural research and the environment</b>		
Global	Drafted training module on priority setting in factor-based agricultural research. Continued development of "Information and discussion forum on environment: research-policy linkages" on ISNAR's Website. Produced ISNAR Briefing Paper 41 on methodology for quantifying benefits from NRM research.	IDRC, DGIS/NEDA, SDC, KARI
	Revised guidelines for operation of Ecoregional Methods Fund, developing procedure to facilitate self-evaluation of ecoregional projects by partners and stakeholders.	DGIS/NEDA
Asia	Evaluated multicountry ecoregional project.	DGIS/NEDA
Sub-Saharan Africa	Prepared concept note and proposal for multicountry project on horizontal links among health, environment, and agricultural sectors in Africa.	
<b>10. Improving tools for research policy formulation, strategic planning, research linkages, and research system development</b>		
Global	Produced final draft of research report on use of analytic hierarchy process in priority setting in agricultural biotechnology research, for publication in 2000.	SDC, ETH
	Completed final draft of sourcebook on planning in agricultural research, including chapter on guidelines for formulating research policy.	BMZ
Latin America and Caribbean	Initiated research on organization and financing of agricultural and agroindustrial R&D to identify implications for Southern Cone of Latin America. Developed conceptual framework on institutional innovation and launched research in developed countries. Produced case-study reports on the UK, Netherlands, Switzerland, and USA. Drafted research report in Spanish.	PROCISUR, University of Iowa, NRLO, ETH
Sub-Saharan Africa	Publishing Research Report 15 on findings of action-oriented project on planning linkages between research, technology transfer, and farmers' organizations.	DGIS/NEDA, Senegal, Mali, Tanzania, Zimbabwe
	Drafted two management guidelines on how to improve contribution of universities to national agricultural research (under review).	
	Continued research on stability/instability factors in agricultural research in sub-Saharan Africa. Paper ("Agricultural policy process in Africa: The role of policy analysts") reproduced in ECAPAPA electronic bulletin.	SPAAR, ECAPAPA
Philippines Uganda	Launched case studies in Philippines and Uganda on using analytic hierarchy process as user-friendly support tool to assist in priority setting for biotechnology research.	SDC, ETH, PCARRD, Philippine Bureau of Agriculture, NARO, Makerere University

... ISNAR's ability to respond to requests with targeted funding depends on the base created by the generous support of its unrestricted core donors. . . .

<b>11. Towards integrated project-based agricultural research management systems</b>		
Global	Completed draft of handbook on information systems for research managers and information specialists.	
	Upgraded existing INFORM management information system to INFORM-R for use in Microsoft Access. Developed INFORM Website, where INFORM-R can be downloaded ( <a href="http://www.cgiar.org/isnar/inform.htm">www.cgiar.org/isnar/inform.htm</a> ). Developed stripped version of the software, called <i>INFORM-R Light</i> for smaller systems.	
	Finalized agreement with Dutch research foundation NWO to use INFORM-R in their health projects. Created nonprofit foundation (United Developers Foundation) to maintain and support INFORM-R.	NWO
<b>12. Gender relations in agricultural research: Strengthening core competencies in policy, organization, and management</b>		
Global	Set up program of work for ISNAR's overall gender program (to be implemented in 2000). Developed project proposal for component "Women in National Agricultural Research" (WINAR). Established databases for WINAR.	CGIAR Gender and Diversity Program
<b>13. Strengthening NARS through diagnostic reviews, planning, and facilitation of institutional development</b>		
Indonesia Pakistan Sri Lanka Vietnam	Developed project proposal on performance-based management systems, approved by Asian Development Bank. Launched project in four countries.	ADB
Croatia	Produced report on research planning and priority setting.	ARC-Croatia
Eritrea	Assisted in formulating investment project.	FAO
Guinea	Supported production of medium-term plans for six IRAG research centers as well as a report on IRAG's program budgeting system.	World Bank, IRAG
India	Published Country Report 59 on formulating an information strategy for ICAR.	ICAR
Iran	Assisted in prioritizing Rice Research Institute's research program. Helped with project on farmer-extension-researcher collaboration for technology development and diffusion in rice-based production systems. Produced report with recommendations for improving farmer-researcher-extension linkages and research programming in two provinces	Iran, AREEO
	Published Country Report 60 on developing an information strategy for AREEO.	AREEO
Mozambique	Signed contract for INIA-ISNAR collaboration to implement institutional development activities and recruited experienced research manager to support this collaboration.	Danida, World Bank, INIA
Nicaragua	Conducted review of policy for agricultural research.	IDB/World Bank, Nicaragua
Philippines	Published Country Report 61 on strategy for developing information technology in agricultural research for PCARRD.	PCARRD
Republic of South Africa	Assisted ARC in formulating program budgets for cross-cutting programs and in initiating process of strategic and program planning.	DFID, ARC-RSA
Sri Lanka	Undertook evaluation of CARP and produced review report with findings and recommendations (see also under project 4).	GTZ, DFID, CARP
Uganda	Helped formulate the 2000–2010 strategy and second phase of agricultural research training project.	World Bank, NARO
Vietnam	Prepared FAO-ISNAR agreement to assist the Government of Vietnam in developing strategic and medium-term plans.	UNDP, FAO, national team
Zambia	Launched activities to help improve performance of Zambian NARS. Drafted agreement with World Bank and trained trainers in participatory research.	World Bank

... Many of ISNAR's core donors also provide targeted contributions. ...

<b>14 The double transition: Building NARS for the 21<sup>st</sup> century in Central Asia and the Caucasus</b>		
Central Asia and Caucasus	Published highlights of expert consultation in 1998 in English (published on ISNAR's Website) and Russian.	CGIAR Finance Committee, IFAD
	Developed proposal "Agricultural knowledge and information in transition economies: A triple transition."	
Armenia Azerbaijan	Drafted country profiles of Armenia and Azerbaijan (under review for publication).	IFAD
Georgia	Prepared in-depth study of reform of Georgia's NARS (under review).	IFAD
	Provided on-going technical assistance and training to lay groundwork for needed reforms. Participated in development of implementation plan and conceptual framework for "Reform of agricultural research, education, and extension" component of World Bank project.	World Bank, Georgia
Kazakhstan	Provided technical support to prepare steering-committee report of program activities accomplished, to draft country profile and national strategy for AKIS reform.	World Bank, CRP, NACAR, CIMMYT
Ukraine	Assisted in initiating activities to launch reform activity.	World Bank, UAAS
<b>15. Strengthening institutions to participate in the emerging global research system</b>		
Global	Provided direct support to NARS and subregional organizations through continued secondment of a senior advisor to NARS Secretariat of the Global Forum.	NARS, FAO, DGIS
Latin America and Caribbean	In association with IDB, carried out a study of potential for Fontagro-European collaboration.	IDB, Fontagro
Sub-Saharan Africa	Produced report to assist CGIAR in developing revised strategy for sub-Saharan Africa.	SPAAR, SROs, other IARCs
Eastern and Central Africa	At ASARECA'S request, refined proposal on strengthening network management.	ASARECA
	Assisted ASARECA/ECART/CTA in conducting workshop on impact assessment.	ECART, CTA, ASARECA
West and Central Africa	Provided support to CORAF's strategic planning through preparation of CORAF consultant and review of reports.	CORAF
<b>16. Global information center on agricultural research policy, organization, and management</b>		
Global	Improved access to ISNAR information through further development and expansion of ISNAR's Website. Continued production of traditional and electronic publications, including continued conversion of ISNAR publications to electronic format for Internet posting.	
<b>17. ISNAR Global Associates: Strengthening regional capacity to serve regional needs for institutional change in NARS</b>		
Global	Expanded network of ISNAR Associates to seven specialists. Identified six additional experts. <i>(See also specific activities detailed below.)</i>	
Sub-Saharan Africa	Four ISNAR Associates participated as organizers and trainers in regional IARC-NARS (INTG) management training courses in Swaziland (anglophone) and Burkina Faso (francophone).	INTG
Brazil	Office established at EMBRAPA by ISNAR Associate to enhance collaboration.	EMBRAPA
Kenya	ISNAR represented by ISNAR Associate at conference of African Evaluation Association.	UNICEF, IDRC
Mauritius	Training on scientific writing delivered by ISNAR Associate.	MSIRI
Nicaragua	Review of policy for agricultural research conducted by two ISNAR Associates.	IDB/World Bank, Nicaragua
Zambia	Course in participatory research delivered by ISNAR Associate.	

... Unrestricted core support enables ISNAR to deploy resources to meet CGIAR goals, priorities, and strategies."  
*Stein W. Bie, Director General*

## 18. Building NARS capacity for training and facilitation of change processes

Global	Continued (1) development and production of training materials and modules with guidelines for trainers and (2) preparation for posting on ISNAR's Website. Published first training CD-ROM containing 10 training modules. Provided support to NARS in delivering training programs.	
Sub-Saharan Africa	INTG: Continued work under INTG training group for sub-Saharan Africa through development of new and adaptation of existing training materials and modules in English and French. Held regional IARC-NARS management training courses in Swaziland (anglophone) and Burkina Faso (franco-phone). Annual INTG program implemented by national and regional trainers; annual meeting held in Accra.	CGIAR, NAROs in SSA; IARCs, regional institutions
West and Central Africa	Prepared and carried out training needs-assessment workshop for research program leaders from NAROs in 10 francophone countries of West and Central Africa.	AfDB, participating NAROs
India	Carried out groundwork under phase 1 of "Action-research distance-training project for agricultural research management." Established NAARM team and carried out fieldwork in India. Held two advisory group meetings. Conducted workshop at NAARM to design distance-training strategy for NAARM. Drafted applied research report concluding project's first phase.	DFID, NAARM, Wye College, COL



### Unrestricted Core Donors

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Norway  
Philippines

South Africa  
Spain  
Sweden

Switzerland  
United States  
World Bank (IBRD)



# Publications in 1999

Most ISNAR publications are published both on paper and in electronic format. The electronic versions are accessible via ISNAR's Web site ([www.cgiar.org/isnar](http://www.cgiar.org/isnar)) and can be downloaded at no charge.

## Corporate and General Publications

Annual Report 1998

Medium-Term Plan 2000–2002

Catalog of Publications 1999–2000

A Selection of Training Modules on Agricultural Research Management

Ecoregional Fund to Support Methodological Initiatives: Guidelines for Submitting Proposals

ISNAR Global Associates program/ Programa Global de Asociados del ISNAR/ Programme Global des Associés de l'ISNAR

Guidance manual for ISNAR associates/ Guide des associés de l'ISNAR/ Manual para los asociados del ISNAR

CD-Rom: Agricultural Research Management, containing 10 training modules

## Book

*Managing Agricultural Biotechnology: Addressing Research Program Needs and Policy Implications*, edited by **J.I. Cohen**. Wallingford, UK: CAB International. Contributors: M. Amstalden Sampaio, J. Bennett, M. Blakeney, **T. Braunschweig**, E. Brito da Cunha, **J.I. Cohen**, S. Crespi, E. Duran, **C.A. Falconi**, B. Holloway, M. Jackson, **W. Janssen**, K. Jenny, **J. Komen**, A. Lovejoy, S. Moeljopawiro, E. Mubashir, C. Muñoz, D. Norris, P. Rieder, S. Salazar, E. Schaltegger, A. Sittenfeld, T-S. Soong, Y. Tabei, R. Tripp, P. Traynor, M. Whalon

## ISNAR Briefing Papers

No. 37s. Estudio de Caso Gerencial Exitoso: La Creación de un Sistema Nacional de Investigación Agrícola Coordinado: El Caso de Costa Rica. Por H. Hobbs, F. Mojica Bentancour O. Bonilla Bolaños, y E. Solís Quirós.

No. 41. Evaluating Research on Natural Resource Management: The Case of Soil Fertility Management in Kenya. By S. W. Omamo, D. W. Kilambya, and S. Nandwa.

No. 42. Agricultural Biotechnology Research Capacity in Four Developing Countries. By C.A. Falconi.

## Research Reports

No. 14. Establecimiento de Prioridades en la Investigación Biotecnológica Mediante el Proceso Jerárquico Analítico. Por T. Braunschweig y W. Janssen.

No. 15. Planning Linkages between Research, Technology Transfer and Farmers' Organizations: Results of an Action-Oriented Project in Mali, Senegal, Tanzania, and Zimbabwe. By T. Eponou, W. Peterson, A. Wuyts-Fivawo, and M. Wilks.

## Country Reports

R59. Agricultural Research Information System (ARIS). Published with the Indian Council of Agricultural Research

R60. Information Policy for Agricultural Research (IPAR). Published with the Agricultural Research, Education, and Extension Organization of the Islamic Republic of Iran

R61. Strategy for Development of an Information Technology in Agricultural Research (ITAR). Published with the Philippine Council for Agriculture, Forestry and Natural Resources Research and Development

## External Publications

Batz, F.J., K. Peters and **W. Janssen**. The influence of technology characteristics on rate and speed of adoption. *Agricultural Economics* 21 (2):121–130.

**Bie, S.W.** Institutions matter. In *Currents* 19–20: 36–37.

**Bigman, D.** and **M.E. Loevinsohn**. Targeting agricultural R&D for poverty reduction: General principles and an illustration for Sub-Saharan Africa. [www.ciat.cgiar.org/poverty/bar\\_papers.htm](http://www.ciat.cgiar.org/poverty/bar_papers.htm) (31 Dec. 1999).

**Braunschweig, T.** Priority setting in agricultural biotechnology research: Supporting public decisions in developing countries with the analytic hierarchy process. Zurich: Swiss Federal Institute of Technology.

**Braunschweig, T.** and **W. Janssen**. Incorporating the strategic component of biotechnology into public sector research evaluation. In *Proceedings of the ICABR conference on the shape of the coming agricultural biotechnology transformation: Strategic investment and policy approaches from an economic perspective*, edited by W. Lesser. Rome: University of Rome.

Chandel, B.S. and **P.T. Perrault**. Agricultural research and poverty alleviation in India: Management issues. [www.ciat.cgiar.org/poverty/bar\\_papers.htm](http://www.ciat.cgiar.org/poverty/bar_papers.htm) (31 Dec. 1999).

**Cohen, J.I.** Biotechnology policy seminars: Past, present and future. In *Turning priorities into feasible programs: Proceedings of a policy seminar on agricultural biotechnology for Latin America. Peru, 6–10 October, 1996*, edited by J. Komen, C. Falconi, and H. Hernandez. The Hague/Mexico, DF: Intermediary Biotechnology Service/CamBioTec.

**Cohen, J.I., C. Falconi,** and **J. Komen**. Research policy and management issues. Policy brief for *Biotechnology for developing-country agriculture: Problems and opportunities*, edited by G. Persley. Washington, DC: International Food Policy Research Institute.

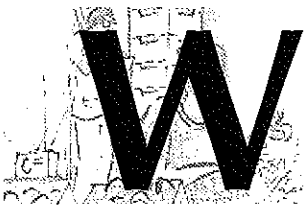
**Cohen, J.I., C. Falconi,** and **J. Komen**. Perspectives from international agricultural research center. In *Intellectual property rights in agriculture: The World Bank's role in assisting borrower and member countries*, by U. Lele, W. Lesser, and G. Horstkotte-Wesseler. Washington, DC: World Bank.

**Falconi, C.** Funding agricultural biotechnology in Peru: A profitable investment. In *Turning priorities into feasible programs: Proceedings of a policy seminar on agricultural biotechnology for Latin America. Peru, 6–10 October, 1996*, edited by J. Komen, C. Falconi, and H. Hernandez. The Hague/Mexico, DF: Intermediary Biotechnology Service/CamBioTec.

**Falconi, C.** Socioeconomic analysis in IBS. In *Turning priorities into feasible programs: Proceedings of a policy seminar on agricultural biotechnology for Latin America. Peru, 6–10 October, 1996*, edited by J. Komen, C. Falconi, and H. Hernandez. The Hague/Mexico, DF: Intermediary Biotechnology Service/CamBioTec.

**Falconi, C.** Agricultural biotechnology research indicators in developing countries. In *Proceedings of the international conference "The shape of the coming agricultural biotechnology transformation: Strategic investment and policy approaches from an economic perspective," Rome 17–19 June, Rome*, organized by Tor Vergata University of Rome.

**Falconi, C., H. Hernandez,** and **J. Komen**. Working at the national level: Summary and follow-up planning. In *Turning priorities into feasible programs: Proceedings of a policy seminar on agricultural biotechnology for Latin America. Peru, 6–10 October, 1996*, edited



While the Internet and other new media are transforming laboratories and libraries almost everywhere, radio still remains the most accessible communicator in rural areas throughout the developing world. Radio's wide coverage—from boardrooms in the advanced industrialized nations to homes in the farthest flung corners of Africa, Asia, and Latin America—is the reason why ISNAR chose it as its vehicle for articulating information on the importance of agricultural research for developing-country populations and prosperity.

To mark its 20 years of service to national agricultural research, ISNAR sponsored the production of a series of radio features that gave developing-country collaborators a chance to discuss aspects of their work with ISNAR. Involvement of NARS leaders lent a distinct regional flair to each reportage. The features, produced by WREN Media and the Inter-American Institute for Cooperation in Agriculture (IICA), in some cases with collaboration of local journalists, were broadcast widely by radio stations in, for example, Zambia, Madagascar, Haiti, and Pakistan.

The programs are still available for listening via ISNAR's website, and can be accessed at [www.cgiar.org/isnar/audio/programs.htm](http://www.cgiar.org/isnar/audio/programs.htm).

### Asia series

Getting there faster! Strengthening agricultural research planning ■ Networking: a revolution in communication ■ So far and yet so near: the promise of distance learning ■ Global Forum for Agricultural Research

### Africa series

Getting there faster! Strengthening agricultural research planning ■ Something to celebrate ■ Focus on universities ■ Global Forum for Agricultural Research ■ Le rôle de l'ISNAR dans l'amélioration de la gestion de la recherche agricole au Bénin ■ Une gestion régionalisée, pour une plus grande efficacité de la recherche agricole au Bénin ■ Le FARA : Forum International de la Recherche Agricole

### Latin America series

Biotechnología: El futuro es ahora... ■ Uniendo Esfuerzos para enfrentar los retos globales ■ Un Cambio Participativo ■ Fortaleciendo las cadenas agroalimentarias ■ Un foro Global para la Investigación Agrícola

by J. Komen, C. Falconi, and H. Hernandez. The Hague/Mexico, DF: Intermediary Biotechnology Service/CambioTec.

**Gijsbers, G.** Governance, accountability and organizational performance of Asian agricultural research. In *Agricultural planning in Asia*. Proceedings of a workshop held in Bogor, Indonesia, April 13–24, 1998.

Gotsch, N. and T. Braunschweig. Problem identification and knowledge acquisition for the solution of pest problems: A suggestion for a comprehensive approach. *Integrated Pest Management Reviews* 4(3): 183–93.

**Horton, D.** Building capacity in planning, monitoring and evaluation: Lessons from the field *Knowledge, Technology & Policy* 11(4):152–188.

**Horton, D.** Book review: Utilization-focused evaluation (3rd edition),

by Michael Q. Patton, Thousand Oaks, CA: Sage, 1996, 432 pp. *American Journal of Evaluation*: 20(2): 399–401.

**Horton, D.** Book review: Evaluation frameworks for development programmes and projects, by Reidar Dale. New Delhi/Thousand Oaks/London: Sage, 1998, 150 pp. *Science, Technology and Society*: 4: 137–143.

**Horton, D.** and J. Borges-Andrade. Evaluation of agricultural research in Latin America and the Caribbean. *Knowledge, Technology & Policy* 11(4):42–68.

**Horton, D.** and R. Mackay (guest editors). Evaluation in developing countries: Experiences with agricultural research and development. Special issue of *Knowledge, Technology, & Policy* 11 (4).

**Horton, D.** and R. Mackay. Evaluation in developing countries: An introduc-

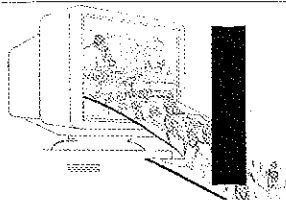
tion. *Knowledge, Technology & Policy* 11(4): 5–12.

**Horton, D.** and R. Mackay. Assessment of organizational impacts: Progress report on an evaluation in Latin America. In *A synthesis of findings concerning CGIAR case studies on the adoption of technological innovations*, edited by L. Sechrest, M. Stewart, and T. Stickle. Impact Assessment and Evaluation Group (IAEG): Rome.

**Hoste, C.** Livestock development policies in sub-Saharan Africa. Wageningen: Technical Centre for Agricultural and Rural Cooperation (CTA).

**Hoste, C.** Politiques de développement de l'élevage en Afrique subsaharienne. Wageningen: Centre technique de coopération agricole et rurale (CTA).

**Janssen, W.** Tendencias en la organización y el financiamiento de la investigación agrícola en los países



In 1999, ISNAR completely redesigned its home page on the World Wide Web to make it easier for visitors to the Website to find information on it. The Website now has an advanced Search function that helps readers navigate through the more than 1000 pages posted. With new material posted every month, the Spotlight section on the front page offers a quick overview of interesting new publications, training events, information about projects, etc.

Since the site was launched in 1995, a major concern in its design has been to enable even users with the slowest connections to the Internet to access the information in our pages easily and fast. One of the ways in which we have achieved this is using graphics economically and only where necessary, and making them as lean as possible.

### Publications

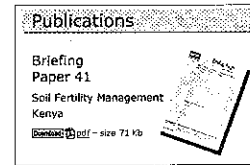
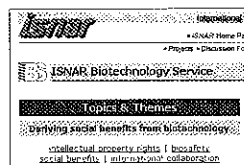
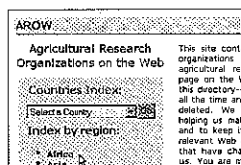
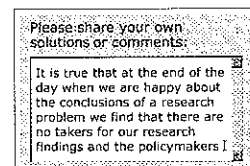
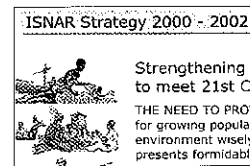
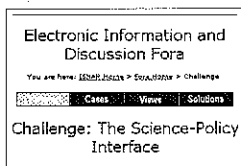
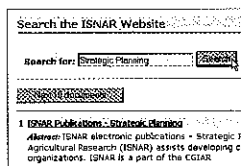
All ISNAR publications published since 1995 can be accessed directly in electronic format. We have improved the search function in the on-line catalog. Users can now browse for publications under ISNAR's main areas of work, as well as by author, title, and category.

### Training materials

Many ISNAR training modules can be accessed, and a fast growing number of users now download the modules directly from the Web, cutting costs for both ISNAR and users.

### Directory of agricultural research organizations

ISNAR's directory of agricultural research organizations with a homepage on the Web (AROW) is growing steadily. It now offers links to over 1100 agricultural research institutions, universities, and regional associations in more than 80 developing and developed countries.



ISNAR's Website has grown into an essential resource for researchers, investors, the media, and the general public.

desarrollados. Proyecto Global, Serie Resúmenes Ejecutivos No. 13. Montevideo, Uruguay: PROCISUR.

**Janssen, W.** and C. Herruzo. Strategic alliances between FONTAGRO and European research organizations and development agencies: Finding common ground. Special Report no. 3. Washington, DC: Regional Fund for Agricultural Technology in Latin America and the Caribbean.

**Komen, J.** International initiatives in agri-food biotechnology. In *Biotechnology in the developing world and countries in economic transition*, edited by G.T. Tzotzos. Wallingford, Oxon: CAB International.

**Komen, J.** Information services and international collaboration: Activities initiated by IBS. In *Turning priorities into feasible programs: Proceedings of a policy seminar on agricultural biotechnology for Latin America*. Peru, 6–10 October, 1996, edited by J. Komen, C. Falconi, and H. Hernandez. The Hague/Mexico, DF: Intermediary Biotechnology Service / CamBioTec.

**Komen, J., C. Falconi,** and H. Hernandez (editors). *Turning priorities into feasible programs: Proceedings of a policy seminar on agricultural biotechnology for Latin America*. Peru, 6–10 October, 1996. The Hague/Mexico, DF: Intermediary Biotechnology Service / CamBioTec.

**Michelsen, H.** and F. Hartwich. Research performance of agricultural research institutes: Results from comparative case studies in francophone West Africa. In *Farmers and scientists in a changing environment: Assessing research in West Africa. Proceedings of the regional workshop held in Cotonou, Benin, February 22–26, 1999*, edited by G. Renard et al. Weikersheim.

**Mook, B.** Information management for agricultural research. *Quarterly Bulletin of the International Association of Agricultural Information Specialists*. Special issue following the conference "The role of information in decision making in agricultural research and practice" held June 2–5, 1998, Freising, Germany. XLIV(1/2): 9–12.

**Pardey, J.M., J. Roseboom,** and B.J. Craig. Agricultural R&D investments and impacts. In *Paying for agricultural productivity*, edited by J.M. Alston, P.G. Pardey, and V.H. Smith. Baltimore: Johns Hopkins University Press.

**Roseboom, J.** and H. Rutten. Financing agricultural R&D in the Netherlands: The changing role of government. In *Paying for agricultural productivity*, edited by J.M. Alston, P.G. Pardey, and

V.H. Smith. Baltimore, US: Johns Hopkins University Press, pp. 215–246.

**Souza Silva, J. de.** ¿Una época de cambios o un cambio de época? *Revista Forestal Centroamericana* No. 28. Turrialba.

**Tollini, H.** Globalização do Mercado de Tecnologia Agrícola. *Anais do XXXVII Congresso Brasileiro de Economia e Sociologia Rural, Mercosul Agribusiness in the Global Economy*, and First SOBER/IAAE joint symposium "The Challenges for Agricultural Business and Trade in South America for the Coming Decades" August 1–5, 1999, in Foz do Iguaçu, Parana, Brazil.

**Tollini, H.** Velhos e Novos Mitos sobre Agricultura. *Revista de Política Agrícola*, VIII.2, Companhia Nacional de Abastecimento (CONAB), Ministério da Agricultura e do Abastecimento, Brazil.

**Vernon, R.** The information needs of agricultural research management. *Quarterly Bulletin of the International Association of Agricultural Information Specialists*. Special issue following the conference "The role of information in decision making in agricultural research and practice" held June 2–5, 1998, Freising, Germany. XLIV (1/2): 45–55.

#### Discussion Papers

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

DP 99-1. The legacy of the Soviet Agricultural Research System for the Republics of Central Asia and Caucasus. By A. Morgunov and L. Zuidema. *Published in English and in Russian.*

DP 99-2. Improving collaboration between research and extension workers. By L. Zuidema.

DP 99-3. The impacts of globalization on agricultural technology markets in developing countries: Toward a conceptual framework. By S.W. Omamo and C. Falconi.

DP 99-4. An alternative view on the generation of agricultural knowledge: Revising the systems approach to national agricultural research. By F. Hartwich and G. Meijerink.

DP 99-5. A comparative analysis of past and current MIS data sets in NAROs, and placement on the Internet of globally relevant data. By H. Webber.

DP 99-6. The constraints of institutionalization of management information systems (MIS) in national

agricultural research systems (NARS) in developing countries. By H. Webber.

DP 99-7. Agricultural biotechnology research indicators: Indonesia. By S. Moeljopawiro and C. Falconi.

DP 99-8. Agricultural biotechnology research indicators: Zimbabwe. By J.M. Gopo and C.A. Falconi.

DP 99-9. The transformation of agricultural research systems in the Republics of Central Asia and the Caucasus. By L. Zuidema and S. Tabor. *Published in English and in Russian.*

DP 99-10. What is agricultural biotechnology research capacity in developing countries? By C.A. Falconi.

DP 99-11. Institutional arrangements in national agricultural research: Application of the NIE to agricultural research in developing countries. By F. Hartwich.

DP 99-12. Sources of technological innovation in Brazilian agriculture. By J. Roseboom.

DP 99-13. An ex ante economic and policy analysis of biotechnology research for livestock disease resistance: Trypanosomosis in Africa. By C. Falconi, S.W. Omamo, and G. d'Teteren.

#### Statistical Briefs

*During 1999, the 24 statistical briefs produced under the ASTI project were reformatted for electronic publishing on ISNAR's website: [www.cgiar.org/isnar/programs/pmd/asti/publicat.htm](http://www.cgiar.org/isnar/programs/pmd/asti/publicat.htm)*

#### Other Unofficial Publications

Highlights of an expert consultation: Agricultural research, policy, organization and management in Central Asia and the Caucasus. *Published in English and in Russian.*

Informe del taller regional construcción de capacidades y materiales en gestión estratégica del cambio institucional. San Rafael de Heredia, 31 de mayo - 25 de junio, 1999. Por J. Cheaz, J. de Souza Silva y J. Calderón. Coronado, Costa Rica: Proyecto ISNAR "Nuevo Paradigma".

Fortalecimiento de la planificación, seguimiento y evaluación en la administración de la investigación agropecuaria en América Latina y el Caribe. Por A. Andersen, J. Cheaz, D. Horton, R. Mackay, y J. de Souza Silva. Informe del taller de revisión de resultados parciales del proyecto, llevado a cabo en Quito, 3 al 14 de febrero 1997.

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ISNAR's Costa Rica office staff



## Financial Report for 1999

The accompanying financial statements were prepared in accordance with generally accepted accounting principles and CGIAR financial guidelines. ISNAR has established and maintains a strong system of internal controls to ensure that assets are safeguarded and transactions properly executed. The audit committee of the ISNAR Board of Trustees meets regularly with management and representatives of the external auditors to review matters related to financial reporting, internal controls, and auditing. These financial statements were audited and approved by the independent accounting firm Deloitte and Touche. ISNAR's result for the year is a shortfall of income amounting to US \$1,174,000.

The main factor behind this shortfall is a reduction from core donors. In 1998 ISNAR's unrestricted revenue amounted to \$6.5 million, whereas the comparable figure in 1999 was \$5.3 million. This reduction is largely attributable to the non-inclusion in the 1999 figures of any grant revenue from the European Union. The European Union, a traditional donor to ISNAR and most other CGIAR centers, was unable to implement a contribution for 1999 due to procedural changes within its own organization. This decision was announced only in December 1999, by which time little could be done to lessen the impact for that financial year.

Good news came from other donors. Sweden, also a traditional donor, increased its contribution from SEK 1.0 million to 2.5 million, amounting to some \$170,000. Brazil returned as an ISNAR core contributor and China doubled its contribution from \$20,000 to \$40,000. Japan maintained its contribution at 73,000,000 yen, but due to the strength of the Japanese currency at the time of the transfer, this amounted to a \$40,000 increase.

ISNAR's operating costs in 1999 were \$9.7 million, a reduction of some \$250,000 from the previous year. The biggest expenditure component continues to be personnel costs, at 61% of ISNAR's total costs.

As a result of the 1999 shortfall, ISNAR enters 2000 with an operating fund of only \$85,000. This is inadequate for an organization with ISNAR's global mandate. Our mandate to assist developing countries in strengthening their agricultural research systems remains valid and necessary, and ISNAR is undertaking vigorous actions to ensure the continuation of its work. Unfortunately, one of these measures has been the non-renewal of some staff contracts, but this was inevitable. We look forward to affirmative action from both the European Union and other organizations to avoid any financial shortfall in 2000.

## Statement of Activity

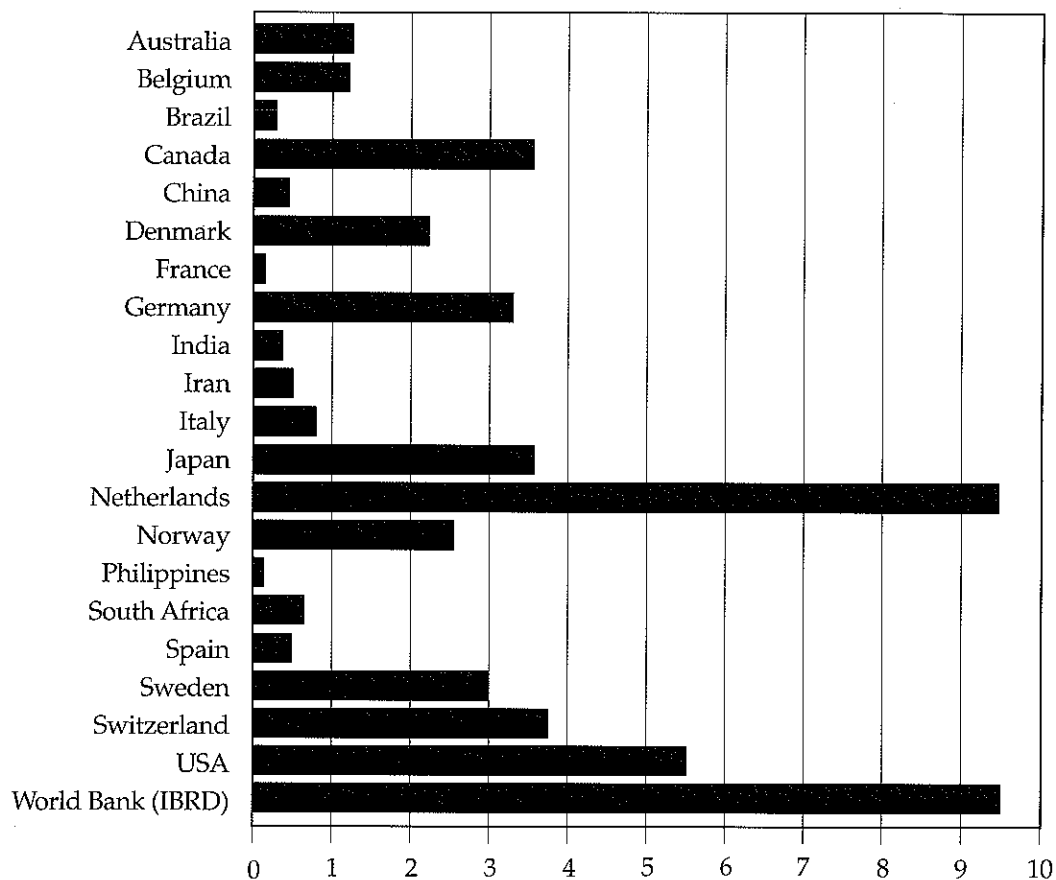
Revenue	US \$000's				Error year
	Core unrestricted	Core- restricted	Comple- mentary	Total 1999	
Grants	5,268	671	2,308	8,247	9,021
Other revenues	233			233	337
<b>Total revenue</b>	<b>5,501</b>	<b>671</b>	<b>2,308</b>	<b>8,480</b>	<b>9,358</b>
<b>Operating expenses</b>					
<b>Programs*</b>					
- Information and New Technologies	390	386	839	1,615	2,520
- Institutional Development and Governance	1,639	131	1,170	2,940	2,804
- ISNAR Global Associates	364			364	150
- Policy and Mngmt. Developm. and Environ. Management and administration	714	154	169	1,037	1,570
	3,568		130	3,698	2,865
<b>Total operating expenses</b>	<b>6,675</b>	<b>671</b>	<b>2,308</b>	<b>9,654</b>	<b>9,909</b>
Shortfall over expenditure	(1,174)	-	-	(1,174)	(551)
<b>Allocated as follows:</b>					
Capital fund					
Operating fund	(1,174)			(1,174)	(551)
<b>Total allocation</b>	<b>(1,174)</b>	<b>-</b>	<b>-</b>	<b>(1,174)</b>	<b>(551)</b>
<b>Operating expenses by cost category</b>					
Personnel costs	4,677	319	780	5,776	6,104
Supplies and services	1,747	199	1,026	2,972	2,900
Operational travel	93	153	502	748	767
Depreciation of fixed assets	158	-	-	158	138
<b>Total operating costs</b>	<b>6,675</b>	<b>671</b>	<b>2,308</b>	<b>9,654</b>	<b>9,909</b>

\* In August 1998 ISNAR was reorganized from two into four programs. This financial statement has been prepared on the basis of the organizational structure that was in place in 1999. The comparative figures from 1998 have been adjusted accordingly.



# Donors Supporting ISNAR's Program in 1999

## Contributors of Unrestricted Grants (US \$100,000's)



## Contributors of Restricted and Complementary Grants

African Development Bank (AfDB)

*Australia:* Crawford Fund

*Canada:* International Development Research Centre (IDRC)

Consultative Group on International Agricultural Research (CGIAR)

*Croatia:* Ministry of Agriculture and Forestry

*Denmark:* Danish International Development Agency (Danida)

*Ecuador-DFC:* Apoyo al Desarrollo Forestal Comunal en los Andes del Ecuador (special project)

Eritrea/Food and Agriculture Organization of the United Nations (FAO)

*Guinea:* Institut de Recherche Agronomique de Guinée (IRAG)

Institut du Sahel

International Development Association (IDA, World Bank Group)

International Fund for Agricultural Development (IFAD)

*Iran:* Agricultural Research, Education, and Extension Organization (AREEO)

*Japan:* Ministry of Foreign Affairs

*Netherlands:* Directorate-General for International Cooperation (DGIS)

*Nicaragua:* Instituto Nacional de Tecnología Agropecuaria Nicaragua (INTA)

*Palestinian National Authority:* Ministry of Agriculture/United Nations Development Programme (UNDP)

Programa Cooperativo para el Desarrollo Tecnológico Agropecuario del Cono Sur (PROCISUR)

Rockefeller Foundation

*South Africa:* Agricultural Research Council

*Spain:* Instituto Nacional de Investigación y Tecnología Agraria y Alimentaria (INIA)

*Sri Lanka:* Council for Agricultural Research Policy (CARP)

*Switzerland:* Swiss Agency for Development and Cooperation (SDC)

*Switzerland:* Swiss Federal Institute of Technology (ETH)

*Uganda:* National Agricultural Research Organization (NARO)

Ukraine/International Bank for Reconstruction and Development (IBRD)

*United Kingdom:* Department for International Development (DFID)

*USA:* United States Agency for International Development (USAID)

*Venezuela:* Fondo Nacional de Investigaciones Agropecuarias (FONAIAP)

Vietnam/United Nations Development Programme (UNDP)

Zambia/International Bank for Reconstruction and Development

# Acronyms/Abbreviations

<b>AAEA</b>	American Agricultural Economics Association	<b>IBRD</b>	International Bank for Reconstruction and Development (The World Bank Group)
<b>AARINENA</b>	Association of Agricultural Research Institutions in the Near East and North Africa	<b>IBS</b>	ISNAR Biotechnology Service
<b>ACIAR</b>	Australian Centre for International Agricultural Research	<b>ICABR</b>	International Consortium on Agricultural Biotechnology Research
<b>ADB</b>	Asian Development Bank	<b>ICAR</b>	Indian Council of Agricultural Research
<b>AfDB</b>	African Development Bank	<b>IDA</b>	International Development Association (World Bank Group)
<b>AHP</b>	Analytic Hierarchy Process	<b>IDB</b>	Inter-American Development Bank
<b>AIT</b>	Asian Institute of Technology	<b>IDF</b>	Institutional Development Fund (World Bank Fund)
<b>AKIS</b>	Agricultural knowledge and information system	<b>IDIAP</b>	Instituto de Investigaciones Agropecuarias de Panamá
<b>APAARI</b>	Asia-Pacific Association of Agricultural Research Institutions, Thailand	<b>IDRC</b>	International Development Research Centre, Canada
<b>APAFRI</b>	Asia Pacific Association of Forestry Research Institutions	<b>IFAD</b>	International Fund for Agricultural Development
<b>ARC</b>	Agricultural Research Council, Croatia	<b>IGA</b>	ISNAR Global Associates Program
<b>ARC</b>	Agricultural Research Council, South Africa	<b>IICA</b>	Instituto Interamericano de Cooperación para la Agricultura, Costa Rica
<b>AREEO</b>	Agricultural Research, Education, and Extension Organization, Iran	<b>INERA</b>	Institut de l'Environnement et de Recherches Agricoles, Burkina Faso
<b>ARI</b>	Agricultural Research Institute, Cyprus	<b>INFORM</b>	Information for Agricultural Research Managers (ISNAR developed MIS)
<b>ARIS</b>	agricultural research information system	<b>INFORM-R</b>	INFORM Relational
<b>ARMT</b>	agricultural research management training	<b>INIA</b>	Instituto Nacional de Investigación Agronómica, Mozambique
<b>AROW</b>	Agricultural Research Organizations on the WEB	<b>INIA</b>	Instituto Nacional de Investigación y Tecnología Agraria y Alimentaria, Spain
<b>ASARECA</b>	Association for Strengthening Agricultural Research in Eastern and Central Africa	<b>INTA</b>	Instituto Nacional de Tecnología Agropecuaria, Nicaragua
<b>ASTI</b>	agricultural science and technology indicators	<b>INTG</b>	IARC/NARS Training Group
<b>BMZ</b>	Federal Ministry of Economic Cooperation, Germany	<b>IPAR</b>	Information Policy for Agricultural Research
<b>BTG</b>	British Technology Group	<b>IPR</b>	intellectual property rights
<b>CAAS</b>	Chinese Academy of Agricultural Sciences	<b>IRAG</b>	Institut de Recherche Agronomique de Guinée
<b>CABI</b>	CAB International—International Centre for Agriculture and Biosciences, UK	<b>IT</b>	information technology
<b>CamBioTec</b>	Canada-Latin America Initiative on Biotechnology for Sustainable Development	<b>JIRCAS</b>	Japan International Research Center for Agricultural Sciences
<b>CARDI</b>	Caribbean Agricultural Research and Development Institute	<b>KARI</b>	Kenya Agricultural Research Institute
<b>CARP</b>	Council for Agricultural Research Policy, Sri Lanka	<b>KEPHIS</b>	Kenya Plant Health Inspectorate Service
<b>CAS</b>	Central Advisory Service (on Proprietary Technology)	<b>KISR</b>	Kuwait Institute for Scientific Research
<b>CD-ROM</b>	compact disc, read-only memory	<b>MIS</b>	management information system
<b>CDADF</b>	Centro para el Desarrollo Agropecuario y Forestal, Dominican Republic	<b>MSIRI</b>	Mauritius Sugar Industry Research Institute
<b>CGIAR</b>	Consultative Group on International Agricultural Research	<b>NAARM</b>	National Academy of Agricultural Research Management, India
<b>CMRT</b>	Crop Management Research Training Project, Project of the University of Egerton	<b>NACAR</b>	National Academic Center for Agricultural Research, Kazakhstan
<b>COL</b>	Commonwealth of Learning	<b>NARO</b>	national agricultural research organization
<b>CONAB</b>	Companhia Nacional de Abastecimento	<b>NARO</b>	National Agricultural Research Organization, Uganda
<b>CORAF/WECARD</b>	West and Central African Council for Agricultural Research and Development (Conseil Ouest et Centre Africain pour la Recherche et le Développement Agricoles)	<b>NARS</b>	national agricultural research system(s)
<b>CTA</b>	Technical Centre for Agricultural and Rural Cooperation (ACP-EEC Lomé Convention)	<b>NGO</b>	nongovernmental organization
<b>Danida</b>	Danish International Development Agency	<b>NRLO</b>	National Council for Agricultural Research, Netherlands
<b>DFC</b>	Apoyo al Desarrollo Forestal Comunal en los Andes del Ecuador	<b>NRM</b>	natural resource management
<b>DFID</b>	Department for International Development, UK	<b>PAPA</b>	participant action plan approach
<b>DGIS</b>	Directorate-General for International Cooperation	<b>PCARRD</b>	Philippine Council for Agriculture, Forestry and Natural Resources Research and Development
<b>ECAPAP</b>	Eastern and Central Africa Programme for Agricultural Policy Analysis	<b>PM&amp;E</b>	planning, monitoring, and evaluation
<b>ECART</b>	European Consortium for Agricultural Research in the Tropics	<b>PROCIANDINO</b>	Programa Cooperativo de Investigación y Transferencia de Tecnología Agropecuaria para la Subregión Andina
<b>EGFAR</b>	Electronic Global Forum on Agricultural Research (CGIAR initiative)	<b>PROCISUR</b>	Programa Cooperativo para el Desarrollo Tecnológico Agropecuario del Cono Sur
<b>Embrapa</b>	Empresa Brasileira de Pesquisa Agropecuária, Brazil	<b>PROINPA</b>	Proyecto de Investigación de la Papa (CIP/Boiivia)
<b>EPO</b>	European Patent Office	<b>R&amp;D</b>	research and development
<b>ESAMI</b>	Eastern and Southern Africa Management Institute, Tanzania	<b>SADC</b>	Southern Africa Development Community (SADC)
<b>ETH</b>	Federal Institute of Technology, Switzerland	<b>SDC</b>	Swiss Agency for Development and Cooperation
<b>EU</b>	European Union	<b>SGRP</b>	the CGIAR's system-wide genetic resources program
<b>FAO</b>	Food and Agriculture Organization of the United Nations	<b>SIHDEA</b>	Hemispheric System of Agricultural Education
<b>FTPP</b>	Forest, Trees, and People Program	<b>SINCITA</b>	Sistema Nacional de Ciencia y Tecnología Agraria, Cuba
<b>FONAIAP</b>	Fondo Nacional de Investigaciones Agropecuarias, Venezuela	<b>Sober</b>	sociedade Brasileira de Economia e Sociologia Rural
<b>Fontagro</b>	Fondo Regional para la Tecnología Agropecuaria	<b>SPAAR</b>	Special Program for African Agricultural Research (World Bank)
<b>GFAR</b>	Global Forum on Agricultural Research (CGIAR initiative)	<b>SROs</b>	subregional research organizations
<b>GTZ</b>	Deutsche Gesellschaft für Technische Zusammenarbeit, Germany	<b>SSA</b>	sub-Saharan Africa
<b>IAAE</b>	International Association of Agricultural Economists	<b>TAC</b>	Technical Advisory Committee (CGIAR)
<b>IAEG</b>	Impact Assessment and Evaluation Group	<b>TNA</b>	training needs assessment
<b>IARC</b>	international agricultural research center	<b>UAAS</b>	Ukrainian Academy of Agricultural Sciences
		<b>UNDP</b>	United Nations Development Programme
		<b>UNICEF</b>	United Nations Children's Emergency Fund
		<b>UPM</b>	Universiti Putra Malaysia
		<b>UPOV</b>	(International) Union for the Protection of New Varieties of Plants
		<b>USAID</b>	United States Agency for International Development
		<b>WANA</b>	West Asia and North Africa
		<b>WiNAR</b>	Women in National Agricultural Research

## Résumé

# Favoriser l'appropriation du savoir agricole par le renforcement des capacités individuelles et organisationnelles

Au cours des deux dernières décennies, le monde en développement a vu croître de manière significative le nombre de chercheurs agricoles hautement qualifiés. Cependant, les pratiques scientifiques évoluent et se transforment sous l'effet des changements qui s'opèrent au niveau mondial. En effet, les progrès technologiques se succèdent à un rythme si élevé qu'une formation universitaire reçue il y a dix ans risque d'être moins pertinente dans le contexte d'aujourd'hui. Il s'ensuit inévitablement que les chercheurs agricoles qui n'ont pas la possibilité de suivre des stages de recyclage sont défavorisés lorsque confrontés avec la tâche de choisir parmi les nouvelles technologies. Par ailleurs, l'intégration du développement rural étant aujourd'hui plus poussée que jamais auparavant, le champ d'activité des sciences agricoles doit s'élargir et les chercheurs doivent développer leur aptitude à travailler en équipes pluridisciplinaires. En outre, si d'une part, certaines découvertes nouvelles ont provoqué une distanciation par rapport aux connaissances dites « archaïques » ou « traditionnelles », d'autres ont suscité un renouveau d'intérêt pour les sources du savoir agricole — telles qu'exprimées par exemple dans les connaissances et pratiques indigènes. L'alliance entre la recherche de pointe et le savoir traditionnel donne lieu, entre autres, à des systèmes de connaissance nouveaux, ce qui amène les pays en développement comme les nations industrialisées à explorer de nouveaux cadres institutionnels — cadres qui entraînent des modes de fonctionnement que peu de scientifiques ont formellement appris à gérer. Tous ces éléments concourent à intensifier le besoin de former les cadres à la gestion de la recherche.

Formulé sans équivoque, le mandat de l'ISNAR est de veiller à ce que la communauté scientifique internationale partage les résultats scientifiques de pointe avec le monde en développement. L'ISNAR a également pour tâche d'aider les pays pauvres à développer leurs capacités d'exploitation des nouvelles technologies, c'est-à-dire à appliquer les outils et les connaissances de pointe de manière à pouvoir rehausser le bien-être de leurs populations. Le présent abrégé de l'article principal du rapport d'activité de l'ISNAR pour l'année 1999 propose d'abord une définition des termes « capacité » et « renforcement des capacités » et décrit ensuite comment l'ISNAR collabore au développement des capacités de recherche agricole des pays en développement, en l'abordant à deux niveaux distincts—au niveau organisationnel et à celui de l'individu.

## Que signifie capacité ?

Par « capacité » on peut entendre « l'aptitude d'une personne ou d'une organisation à bien fonctionner et à réaliser ses buts ». Par conséquent, vouloir « développer » ou « renforcer » les capacités, c'est vouloir rendre des personnes ou des institutions capables de bien identifier les problèmes, puis de les résoudre par leurs propres moyens. Bien qu'il existe une ressemblance entre la notion « renforcement des capacités » et d'autres définitions traditionnelles, plus générales, de la notion de « développement », il faut reconnaître une importante différence de mise en relief. En effet, tandis que le terme « développement » s'utilise habituellement pour désigner des changements d'ordre structurel, le « renforcement des capacités » se veut un moyen de déclencher, dans le for intérieur de l'individu ou bien au sein d'une organisation donnée, un processus d'apprentissage qui produira une amélioration des comportements et des performances. Au plan des sciences agricoles, les programmes de renforcement des capacités englobent non seulement des cours de perfectionnement professionnel destinés aux chercheurs individuels, mais aussi des efforts pour améliorer le fonctionnement d'une institution de recherche prise dans son ensemble.

L'assistance qu'offre l'ISNAR aux pays en développement pour les aider à renforcer leurs capacités de recherche agricole est guidée par les trois principes suivants : la participation, l'apprentissage par la pratique, et le respect de la diversité. L'adoption des deux premiers principes montre qu'aux yeux de l'ISNAR, ses collaborateurs — les individus comme les institutions — sont des partenaires participant à part entière à la conception, à la mise en œuvre et à l'évaluation des projets effectués pour consolider leurs capacités. Ces collaborateurs doivent donc être aux commandes, capables d'influencer le rythme et l'orientation des activités projetées en introduisant les changements qui en rehausseront la pertinence. Pour ce qui est de la diversité — l'ISNAR a appris par expérience qu'autant chaque être humain est unique, autant les organisations de recherche sont distinctes les unes des autres. C'est pour cela qu'au travers de ses programmes de renforcement des capacités, l'ISNAR s'efforce de comprendre et de tirer parti de la diversité des formes de savoir et d'expérience ; il préfère en effet collaborer avec des gestionnaires locaux pour trouver des solutions individualisées aux problèmes de gestion que ceux-ci rencontrent, plutôt que de mettre au point des solutions générales devant « s'appliquer à » l'ensemble des personnes ou des organisations.

Une enquête expérimentale a confirmé que, **dans les pays en développement, le secteur agricole est en train de changer sous l'effet de « la mondialisation »**, qui transforme également le mode de fonctionnement des organisations nationales de recherche agricole (ONRA). Par exemple, la plupart des ONRA interrogées participent désormais au système mondial d'information : leur connectivité à l'Internet leur permet de communiquer par courrier électronique et d'avoir accès, plus rapidement et à moindres frais, aux revues et documents scientifiques publiés sur le Web.

Ayant bénéficié du soutien direct de l'ISNAR pendant deux ans, **le Secrétariat des SNRA s'apprête maintenant à poursuivre son travail de façon indépendante**. En favorisant la mise en commun des connaissances et des ressources disponibles, le Secrétariat permet aux SNRA de participer à la formation d'un système mondial de recherche agricole en représentant une position collective avec plus de vigueur.

En 1999, **l'ISNAR a fait paraître son premier CD-ROM** contenant une série de modules de formation. Cette nouvelle forme de publication permet désormais de réduire de manière significative les frais de diffusion des paquets de matériels de formation destinés aux formateurs et membres des services de formation dans les pays en développement.

Une initiative qui visait à renforcer la capacité de gestion des recherches agro-industrielles dans six pays d'Amérique latine a démontré l'intérêt de procéder en formant des partenariats lorsque les pays impliqués se trouvent à des niveaux de capacité interne très différents. Le projet a en outre **élargi le champ d'activité de l'ISNAR en mettant en évidence la chaîne complète de production qui englobe aussi les produits à valeur ajoutée**, au lieu de porter uniquement sur les processus relatifs à la production primaire (cultures et élevage).

En 1999, l'ISNAR a fêté vingt ans révolus au service de la recherche agricole nationale. Pour marquer l'événement, il a entre autres parrainé **une série d'émissions radiophoniques qui fut l'occasion pour des collaborateurs dans plusieurs pays en développement de s'exprimer** sur l'intérêt de la recherche agricole et de la collaboration avec l'ISNAR.

Les responsables de recherche des pays en développement **se préparent à jouer un rôle plus actif dans la sauvegarde des ressources génétiques de notre terre**. En effet, les scientifiques ayant besoin de ces ressources précieuses pour en sélectionner des caractéristiques en vue de réaliser de nouvelles obtentions végétales, leur disponibilité ininterrompue est essentielle au succès futur de la recherche agricole.

Le programme des **Associés de l'ISNAR dans le monde est établi et fonctionne : son registre compte déjà sept noms de chercheurs** ; sept autres s'y ajouteront dans les premiers mois de 2000. En 1999, des associés ont participé à l'organisation de stages de formation au Burkina Faso, au Swaziland, à Madagascar et en Zambie ; à une mission au Nicaragua ; et, en tant que représentants de l'ISNAR, à des réunions internationales tenues au Kenya et au Brésil.

## L'application de ces principes au niveau organisationnel

Le projet que l'ISNAR a mené en Amérique latine et dans la région des Caraïbes au cours de la dernière décennie, pour y consolider les processus de planification, de suivi et d'évaluation (PS&É) de la recherche agricole illustre bien l'application de ces principes. Les évaluations subséquentes de ce projet révèlent qu'il a grandement contribué à renforcer les capacités des individus à planifier, suivre et évaluer les recherches agricoles. Les responsables de recherche ont de plus davantage pris conscience qu'une amélioration des pratiques de gestion pouvait renforcer les capacités de leur organisation. Et ils ont également découvert progressivement qu'un cycle intégré de PS&É peut servir d'outil d'« apprentissage organisationnel », en tant que moyen d'assurer que leur organisation demeure au fait des tendances et opportunités extérieures et puisse réagir en conséquence.

Dans certains cas, le projet a réussi à stimuler un changement de grande envergure au niveau organisationnel : l'ISNAR a vu les institutions en question prendre leur essor, puis tôt ou tard assumer en partie la direction des

activités du projet, l'ISNAR continuant lui-même à remplir un rôle catalyseur et médiateur. Si l'on place ces succès dans le contexte du projet et des expériences que l'ISNAR a vécues avec des organisations de recherche dans d'autres régions du monde, on peut en déduire trois leçons pour la conception et la gestion des programmes de développement des capacités. Tout d'abord, dans les débats sur le renforcement des capacités, les termes « collaborateurs » ou « partenaires » doivent remplacer la notion de « futurs bénéficiaires » ou « populations cibles ». Deuxièmement, les projets de renforcement des capacités doivent réussir à engendrer — au sein des institutions en question — un sentiment d'appropriation du processus de changement et, de ce fait, un engagement de leur part à le mener à bonne fin. En troisième lieu, le renforcement des capacités ne peut être réduit à une simple fourniture d'intrants : il implique en plus une action effective pour faciliter les processus de transformation.

Le projet appelé « Nouveau paradigme », actuellement en cours, a pris la relève du projet PS&É en poursuivant l'effort de l'ISNAR dans le domaine du renforcement des capacités. En effet, cette nouvelle initiative développe le concept de base en visant en particulier la consolidation des compétences en gestion stratégique du changement institutionnel et en favorisant l'engagement institutionnel par des méthodes participatives.

## **Le renforcement des capacités individuelles : la formation des chercheurs et des gestionnaires**

Les stages de perfectionnement des compétences en gestion de la recherche et le renforcement des unités de formation des organisations scientifiques constituent d'autres voies par lesquelles l'ISNAR contribue au renforcement des capacités de recherche agricole dans le monde en développement. La multiplication phénoménale des demandes de formations techniques en gestion de la recherche a poussé l'ISNAR à réunir sa compétence en une série de trousseaux à outils de formation, adaptables et faciles à employer. Ces modules portent sur des thèmes clés de la gestion de la recherche ou des politiques de développement rural : ils examinent, entre autres, comment définir les priorités de recherche, gérer l'information, analyser le partage des responsabilités entre hommes et femmes, et rédiger des projets de recherche convaincants. Les modules permettent aux formateurs et aux membres d'unités de formation de bénéficier de l'expérience en formation que l'ISNAR a acquise au fil des années, ainsi que de la compétence des spécialistes qui ont collaboré à l'élaboration des modules.

Connaître l'apprenant et comprendre les besoins de formation professionnelle des chercheurs et responsables de recherche, voilà la clé du succès de l'approche de formation de l'ISNAR, elle-même fondée sur la théorie de l'apprentissage expérientiel. Les modules de l'ISNAR donnent aux apprenants la possibilité permanente d'analyser leurs besoins avec minutie, et de réfléchir sur la pertinence des concepts enseignés, en les évaluant par rapport à leur propre vécu, professionnel et privé.

Par ailleurs, l'ISNAR a lancé et mené les travaux intensifs d'une entreprise de longue haleine pour former les responsables de la recherche agricole en Afrique subsaharienne. Un programme de huit ans qui visait le renforcement de la capacité de formation en Afrique australe et qui fut dirigé en association avec la SADC (Communauté pour le développement de l'Afrique australe) et avec l'ESAMI (l'Institut de gestion de l'Afrique orientale et australe), a aidé quelques vingt organisations de recherche et de formation à créer des services de formation, ou bien à renforcer des équipes déjà établies. À cela s'ajoute que l'ISNAR compta, en 1999, quatre ans de participation au Groupe de formation CIRA/SNRA (connu également sous son sigle anglais « INTG ») : il s'agit d'initiative internationale de formation, qui œuvre à renforcer les capacités de gestion des chercheurs et responsables de recherche en Afrique subsaharienne. Enfin, l'ISNAR a tout récemment lancé un programme de grande envergure, appuyé par la Banque africaine de développement, pour consolider la capacité de nombre d'institutions scientifiques dans dix pays d'Afrique occidentale à mettre en œuvre des programmes de formation continue.

## **Chaque cas est un cas unique**

L'expérience de l'ISNAR montre qu'il n'existe pas de schéma directeur pour les travaux de renforcement des capacités. Tout comme les êtres humains, les organisations sont uniques. Chaque organisation doit faire son propre chemin et évoluer en assimilant les leçons tirées de sa propre expérience, tout en glanant également de précieux conseils et idées auprès des voisins ou, au besoin, auprès d'autres sources d'assistance extérieure. On peut ainsi conclure que de solides structures de formation continue et des systèmes de gestion perfectionnés, tels que l'ensemble des procédures PS&É, peuvent constituer le pivot du processus de renforcement des capacités, qui est en fait un processus temporel d'apprentissage et de perfectionnement des performances.

# Resumen



# Creando Copropiedad del Conocimiento Agrícola a Través del Desarrollo de Capacidades

El mundo en desarrollo ha logrado durante las últimas dos décadas un considerable incremento en el número de científicos agrícolas bien capacitados. Algunos desarrollos globales están cambiando la manera en la que se práctica la ciencia. Los avances tecnológicos han ocurrido tan rápidamente que es probable que la capacitación universitaria básica recibida hace 10 años sea obsoleta. Sin acceso a capacitación, los científicos agrícolas inevitablemente no estarán preparados adecuadamente para seleccionar entre las nuevas opciones tecnológicas. Aún más importante, el desarrollo rural está más integrado que nunca, lo que significa que las ciencias agrícolas deben ampliar su alcance y mejorar sus habilidades de trabajar en una manera multidisciplinaria. Mientras algunos descubrimientos nuevos nos alejan del conocimiento "antiguo" o "tradicional", otros renuevan nuestro interés y apreciación por las raíces de la sabiduría, tal como es el caso del conocimiento indígena. A medida que el enlace de lo avanzado con lo tradicional ofrece nuevos sistemas de conocimiento, los países en desarrollo y las naciones desarrolladas están explorando nuevos marcos institucionales: nuevas maneras de operar para las cuales muy pocos científicos han sido capacitados adecuadamente. Todo ello nos conduce a una creciente necesidad de capacitación en la gestión de la investigación.

El ISNAR tiene un fuerte mandato para asegurar que la comunidad científica internacional comparta sus ciencias de avanzada con el mundo en desarrollo. El ISNAR también asiste a países en desarrollo a fortalecer sus capacidades para utilizar estas nuevas tecnologías y las últimas herramientas y el conocimiento, con el fin de incrementar el bienestar de sus poblaciones. En este breve resumen del informe anual del ISNAR para 1999, primero se define la "capacidad" y el "desarrollo de la capacidad". Luego se analiza la manera en la cual el ISNAR trabaja para fortalecer las capacidades de los países en desarrollo para realizar investigación agrícola a dos niveles: el nivel organizacional y el nivel individual.

## ¿Qué es capacidad?

La "capacidad" puede ser considerada como la habilidad de un individuo u organización de funcionar bien y lograr sus propósitos. Por lo tanto, las iniciativas para "desarrollar" o "fortalecer" la capacidad habilita a la gente o a las organizaciones a identificar y resolver problemas por ellas mismas. A pesar que el desarrollo de capacidad conlleva algunas similitudes con las nociones tradicionales de desarrollo – y más generales – existe una gran diferencia en el énfasis. Por "desarrollo" generalmente se entiende cambios en estructuras, mientras que desarrollo de capacidad es un medio para engendrar aprendizaje ya sea en los individuos o en las organizaciones, lo cual lleva a mejoras en el comportamiento y desarrollo. En las ciencias agrícolas, el desarrollo de capacidad incluye programas que habilitan a los investigadores a mejorar su desempeño individual en el trabajo, así como también esfuerzos para mejorar las operaciones de la organización de investigación en forma integral.

Tres valores guían el trabajo que el ISNAR realiza para asistir a los países en desarrollo a construir su capacidad de investigación agrícola: la participación, el aprendizaje a través de la acción y el respeto por la diversidad. Ser guiados por los dos primeros valores, significa que el ISNAR considera que individuos e instituciones colaboradoras son socios con pleno derecho en el diseño, la ejecución y evaluación de proyectos que tienen como propósito fortalecer sus capacidades. Dichos socios deben ser puestos en el asiento del conductor, ser capaces de influir la velocidad y dirección de las actividades planificadas y de cambiarlas con el fin de mejorar su relevancia. Con respecto a la diversidad, el ISNAR ha aprendido que así como la gente es única, cada organización de investigación es diferente. En vez de tratar de desarrollar e introducir soluciones generales que "encajan" a todas las gentes u organizaciones, los programas de desarrollo de capacitación del ISNAR intentan comprender y construir sobre la diversidad de conocimiento y experiencia; trabajar con gerentes locales para desarrollar soluciones individualizadas a los problemas gerenciales que ellos enfrentan.

## Practicando los valores a nivel organizacional

Un proyecto que incorporó estos valores fue el esfuerzo del ISNAR que abarcó gran parte de la década pasada para desarrollar la planificación, el seguimiento y la evaluación (PSyE) de la investigación

## Eventos importantes

### Acontecimientos relevantes

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Una encuesta piloto confirmó que **la globalización está transformando el sector agrícola en los países en desarrollo**, y consecuentemente la manera en la cual las organizaciones nacionales de investigación agrícola (ONIA) realizan sus actividades. La mayoría de las ONIA encuestados han acogido el sistema global de información y ahora tienen conexión a correo electrónico. Así mismo tienen acceso rápido y económico, mediante la Internet, a periódicos y documentos científicos que se encuentran en la red.

Después de dos años de contar con el apoyo directo del ISNAR, **la Secretaría de las ONIA está preparándose para conducir su trabajo de manera independiente**. Mediante la unificación de conocimiento y recursos, la secretaría proporciona los medios para fortalecer la voz colectiva de las ONIA en el sistema global de investigación agrícola que está emergiendo.

Un planteamiento de colaboración para proyectos que involucran países con niveles de capacidad interna muy diversos comprobó su valor en una iniciativa de desarrollar capacidades para la gestión y el manejo de la investigación agro-industrial en seis países latinoamericanos. El proyecto **también amplió el enfoque del trabajo del ISNAR mediante el énfasis en toda la cadena del valor agregado**, en vez que en sólo los procesos de producción primaria (el cultivo de cosechas y el cuidado de animales).

Para marcar sus 20 años de servicio a la investigación agrícola, el ISNAR patrocinó **una serie de programas radiales que dio la oportunidad a sus colaboradores en los países en desarrollo a expresar sus puntos de vista** sobre el valor de la investigación agrícola en colaboración con el ISNAR.

Investigadores líderes en países en desarrollo **se están preparando para asumir un papel más activo en la conservación de los valiosos recursos genéticos de la Tierra**. Tales recursos son los bloques de construcción de los científicos para el fitomejoramiento de nuevas características en variedades vegetales. Su continua disponibilidad es crucial para el futuro éxito de la investigación agrícola.

**El programa de Asociados Globales del ISNAR está establecido y desarrollándose con siete profesionales ya registrados y otros siete a ser incorporados a comienzos del año 2000**. Los primeros Asociados del ISNAR han dado capacitación en Burkina Faso, Swazilandia, Madagascar y Zambia; han participado en misiones a Nicaragua y han representado al ISNAR en conferencias internacionales en Kenia y Brasil.

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agrícola en América Latina y el Caribe. Los estudios de evaluación demuestran que el proyecto hizo importantes contribuciones en la construcción de capacidades de individuos para planificar, seguir y evaluar la investigación agrícola. Los líderes de investigación también se percataron mejor de como la gestión mejorada ayudó a fortalecer la capacidad de sus organizaciones. Más importante aún, ellos empezaron a ver como un ciclo integrado de PSyE puede servir como herramienta para el "aprendizaje organizacional", es decir, para mantener a sus organizaciones a la vanguardia y así ser capaces de responder a las tendencias y oportunidades externas.

En algunos casos, el proyecto tuvo éxito en la promoción de cambios a gran escala al nivel organizacional: el ISNAR testimonió como estas organizaciones ganaban ímpetu y finalmente tomaban parte del liderazgo en las actividades del proyecto, mientras que el ISNAR permanecía en un rol catalítico, de facilitación. Estos éxitos, puestos en el contexto del proyecto y las experiencias del ISNAR con organizaciones de investigación agrícola en otras partes del mundo, nos indican tres lecciones para el diseño y la gestión de programas de desarrollo de capacidad. Primero, en el desarrollo de la capacidad la idea de "colaboración" o "socios" debe reemplazar a la noción de "futuros beneficiarios". Segundo, los proyectos de desarrollo de capacidad deben encontrar la manera de engendrar copropiedad y el compromiso de cambio en los institutos involucrados. Tercero, el desarrollo de la capacidad necesita ir más allá de proveer productos o resultados, a realmente facilitar procesos de cambio.

El actual proyecto del ISNAR "Nuevo Paradigma" está construyendo sobre los logros del proyecto PSyE. Este nuevo esfuerzo avanza el concepto de desarrollo de capacidades, enfocándolo en el desarrollo de destrezas y habilidades en el manejo estratégico del cambio institucional y promoviendo el compromiso institucional a través de la participación.

## **Desarrollando la capacidad a través de la capacitación de los investigadores y los gerentes**

Otros medios por los cuales el ISNAR desarrolla la capacidad de investigación agrícola en el mundo en desarrollo son mediante el entrenamiento en la gestión de la investigación y el fortalecimiento de los departamentos de capacitación en las organizaciones científicas. Las crecientes solicitudes de entrenamiento en la gestión de la investigación llevaron al ISNAR a consolidar su competencia produciendo una cantidad de materiales de capacitación fáciles de usar y adaptables. Estos "módulos" se enfocan en áreas claves de la gestión de la investigación y políticas de desarrollo rural, tales como la determinación de prioridades para la investigación, la gestión de la información, el análisis de género y como escribir propuestas convincentes de proyectos de investigación. Usando los módulos, los entrenadores y departamentos de capacitación pueden beneficiarse de los años de experiencia del ISNAR en la conducción de talleres, así como en las competencias de sus especialistas en los temas ofrecidos, quienes colaboraron en el desarrollo de los módulos.

Para el éxito del enfoque de la capacitación del ISNAR, es esencial entender al educando adulto y las necesidades de desarrollo profesional de los investigadores y gerentes de investigación en las regiones en desarrollo en el mundo; dicho enfoque se basa en el aprendizaje mediante la experiencia. Los módulos del ISNAR ofrecen continuas oportunidades a los educandos a escrutar y visualizar sus propias necesidades y a reflexionar sobre la relevancia de los conceptos que están aprendiendo para sus propias vidas y sus trabajos.

El ISNAR también encabeza un programa intensivo a largo plazo de capacitación en investigación agrícola en el África subsahariana. Un programa de ocho años para fortalecer las habilidades de capacitación del África del sur, conducido en colaboración con la Comunidad para el Desarrollo de África del Sur (SADC) y el Instituto de Manejo del Este y el Sur de África (ESAMI), ha ayudado al establecimiento o al fortalecimiento de unidades de capacitación en unas 20 instituciones de investigación y capacitación en la región. Más aún, 1999 fue el cuarto año de colaboración del ISNAR en el Grupo de Capacitación de los CIIA/SNIA (también llamado "INTG"), una iniciativa internacional para el desarrollo de la capacidad, a través de la capacitación a investigadores y gerentes en África subsahariana. Recientemente, el ISNAR inició un programa extensivo para el fortalecimiento de la capacitación en servicio en 10 países del África oriental, con el apoyo del Banco Africano de Desarrollo.

## **Cada caso es único**

La experiencia del ISNAR ha demostrado que no existe un mapa a seguir para el desarrollo de capacidades. Así como cada ser humano es único, así también son las organizaciones. Cada organización debe seguir su propio camino de desarrollo, aprendiendo de sus propias experiencias mientras busca los consejos valiosos y las ideas de sus vecinos y, cuando fuese necesario, otras fuentes externas de asistencia. Fuertes capacidades para proporcionar capacitación, junto con sistemas mejorados de gestión para procesos tales como PSyE, pueden jugar un rol fundamental en el proceso del desarrollo de la capacidad, el cual en realidad consiste en esfuerzos de aprendizaje para mejorar a través del tiempo.

# 总结

## 通过能力建设创立农业知识的所有权

在过去的二十年里，发展中国家经过良好培训的农业科学家的人数显著增加。全球的发展正在使科学的实践方法发生变化。技术进步的速度之快，使得10年前接受的基础大学培训到了今天已经有可能过时。如果没有机会获得在职培训的话，农业科学家面对众多新的技术方案时必将难以做出选择。此外，农村发展的一体化程度超过以往任何时候，这就意味着农业科学的重点必须拓宽，其跨学科式的运作能力必须加强。新的发现不仅使我们离开了“旧的”或“传统的”知识。它还使我们对智慧的根源，例如对土生土长的知识，重新发生了兴趣，有了新的赏识。随着先进与传统的这种结合不断地带来新的知识体系，发展中国家与先进国家一样，正在探索各种新的体制框架，这是绝大多数科学家未曾为之受过充分培训的一些新的运作方式。所有这一切使得对研究管理培训的需要日益加强。

国家农业研究国际服务中心(ISNAR)的一项重要任务是确保国际科学界与发展中国家共享前沿科学。同时，国家农业研究国际服务中心还协助贫困国家加强其使用这些新技术的能力，使它们能够利用最新的手段和知识造福于本国的人口。本文是国家农业研究国际服务中心1999年年度报告的概要，它首先阐述了“能力”和“能力建设”的定义。在此之后介绍了国家农业研究国际服务中心为了在两个层次上—组织一级和个人一级—加强发展中国家的农业研究能力所做的努力。

### 什么是能力？

“能力”可以视为一个个人或组织开展活动和实现目标的能力。因此，以“建设”和“加强”能力为目的的主动行动可以使个人或组织自己发现问题和解决问题。尽管能力建设与传统—以及更普遍—意义上的发展有一些共同之处，但是它们的重点有很大不同。

“发展”通常被理解为指结构的变化，而能力建设则是在个人身上或组织内部引发学习从而导致行为和业绩的改善的一种手段。就农业科学而言，能力建设既包括为改进整个组织的运作所采取的各种努力，也包括可使研究人员改进其个人在职表现的各种方案。

国家农业研究国际服务中心为帮助发展中国家建设其农业研究能力所开展的工作以下列三项指导性价值观念为基础：参与、在实践中学习和尊重多样性。对国家农业研究国际服务中心而言，前两者是指参与协作的个人和机构在设计、实施和评估旨在加强其能力的项目过程中都是完完全全的伙伴。它们必须处在驾驶员的位置上，能够对计划中的活动的速度和方向施加影响，能够对其做出修正，使之更加切合实际。关于多样性，国家农业研究国际服务中心认识到，正如每个人都是独一无二的，每个研究机构也都各不相同。国家农业研究国际服务中心的能力建设项目无意发展和引进一些对所有人或组织都“适用”的总体解决办法；相反，它力图理解和借助知识和经验的多样性，与当地的管理人员一起为他们面对的管理问题制定出个性化的解决方案。

### 在组织一级将价值观念付诸实践

国家农业研究国际服务中心为加强拉丁美洲和加勒比海地区农业研究的规划、监督与评估(PM&E)所开展的一项努力便是体现了这些价值观念的一个项目，这一项目横贯过去十年的大部分时间。一些评估报告表明，该项目对培养个人的农业研究规划、监督与评估能力做出了重要的贡献。研究工作的领导人员也更加清楚地认识到，通过改进管理，可以帮助加强自己的组织的能力。此外，他们开始看到，建立一种规划、监督与评估的综合循环机制，可以作为“机构学习”的一种手段，也就是说，可以借此使他们的组织随时了解外部的趋势和机遇并对其做出响应。

在一些情况下，该项目成功地促成了在组织一级的大规模变革：国家农业研究国际服务中心目睹了这些组织获得势头，并逐渐在项目的活动中占据领导地位，而国家农业研究国际服务中心则继续发挥促进和协助的作用。从项目本身以及国家农业研究国际服务中心在世界其他地区农业研究组织身上取得的经验来看，这些成功的事例表明在能力建设

# 概要

一项试点调查证实，全球化正在使发展中国家的农业部门发生转变，并由此改变着国家农业研究组织的运作方式。接受调查的大多数国家农业研究组织都已接纳了全球化的信息系统，而且目前已连通电子邮件，并可通过国际互联网快速和经济地阅读各种在线期刊和科学论文。

在得到了国家农业研究国际服务中心长达两年的直接支持之后，国家农业研究系统（NARS）秘书处目前正在准备独立开展它的工作。通过汇集知识和资源，该秘书处为加强国家农业研究系统在新兴的全球农业研究体系中的集体声音提供了一种手段。

1999年，国家农业研究国际服务中心发行了它的第一套培训模块光盘，由此大大降低了供发展中国家培训人员和培训部门使用和改编的培训材料的发行成本。

采用伙伴关系的方法来开展一些由内部能力水平具有很大差异的国家参与的项目的价值在开展于六个拉丁美洲国家中的一项建设农业-工业研究管理能力的主动行动中得到了证实。这一项目重点强调完整的增值链条，而不仅仅是初级生产过程（作物种植和牲畜饲养），从而扩大了国家农业研究国际服务中心的工作范围。

为了纪念为国家农业研究提供服务20周年，国家农业研究国际服务中心赞助了一系列广播专题节目，让发展中国家的协作者有机会就农业研究的价值以及与国家农业研究国际服务中心的合作发表自己的看法。

发展中国家的研究领导人正在加紧努力在保护地球的珍贵基因资源的过程中发挥更加积极的作用。这些资源是科学家培育新的植物物种特征的基石。能否不断获得这些资源，对未来农业研究的成功与否至关重要。

国家农业研究国际服务中心的全球合作者项目已经启动并开始运转，目前已有7名专业人员在册，另外7名人员将在2000年初被该项目接纳。第一批国家农业研究国际服务中心合作者在布基纳法索、斯威士兰、马达加斯加和赞比亚提供了培训；参加了前往尼加拉瓜的国别访问；并代表国家农业研究国际服务中心参加了在肯尼亚和巴西举行的国际会议。

项目的设计和管理方面可以总结出三点经验。第一，在能力建设的过程中，必须用“合作者”或“伙伴”的观念取代“潜在受益人”或“目标群体”的观念。第二，能力建设项目必须设法使人们对于开展这些项目的机构内发生的变革产生拥有意识，并大力投身到变革中去。第三，能力建设不能只停留在做一些投入上，而是要切实推动变革的进程。

国家农业研究国际服务中心目前开展的“新模式”项目就是在“规划、监督与评估”能力建设行动的基础上进行的。这项新的努力将概念建设的概念更加推进了一步，其重点在于培育机构变革的战略管理技能以及促进机构的参与和投入。

## 通过培训每一名研究人员和管理人员来实现能力建设

开展研究管理领域的在职培训和加强科学组织内部的培训部门，是国家农业研究国际服务中心培育发展中国家农业研究能力的又一手段。针对对研究管理培训的需求急剧增长的情况，国家农业研究国际服务中心汇聚自身的专长，编制了若干套便于使用、易于改编的培训材料。这些“培训模块”重点放在研究管理和农村发展政策等领域，例如研究重点的确立，信息管理，性别分析，以及有说服力的研究建议书的撰写。通过使用培训模块，教员和培训部门可以借助国家农业研究国际服务中心多年来在提供讲习班方面取得的经验，以及协助编写培训模块的各个专题专家的专业知识。

国家农业研究国际服务中心的培训方法是以“从经验中学习”为基础的，其成功的关键是要对成人学员以及世界上发展中地区的研究人员和研究管理人员的专业发展需要有所了解。国家农业研究国际服务中心的培训模块使学员不断有机会仔细研究自己的需要，并认真考虑他们所学的概念是否切合自己的生活和工作。

国家农业研究国际服务中心还牵头在撒哈拉以南非洲地区开展了一项长期的深入的农业研究管理培训项目。该项目为期八年，旨在加强南部非洲的培训能力，与南部非洲发展共同体（SADC）以及东部和南部非洲管理学院（ESAMI）共同开展；它帮助在该地区内建立或加强了大约20所农业研究和培训机构。此外，1999年是国家农业研究国际服务中心参与国际农业研究中心/国家农业研究系统（IARC/NARS）培训组（又称“INTG”）活动的第四个年头，这是国际上为了以培训方式在撒哈拉以南非洲地区的研究人员和管理人员中间开展能力建设的一项主动行动。最近，国家农业研究国际服务中心在非洲开发银行的支持下，在10个西部非洲国家中发起了一项加强科学组织在职培训能力的广泛的项目。

## 情况各异

国家农业研究国际服务中心的经验表明，能力建设不存在现成的蓝图。正如每个人都是独一无二的，每个组织也都各不相同。每一个组织必须走自己的发展道路，吸取自身的经验教训，同时听取相邻组织的宝贵建议和看法，并在必要时获取外部的援助。能力建设的过程，实际上就是不断努力学习、努力提高的过程，其间，加强提供在职培训的能力，并且采取象规划、管理与评估制度这样的更加优秀的工作管理制度，可以发挥至关重要的作用。





# Централизация знаний в области сельского хозяйства посредством наращивания научного потенциала.

За последние несколько десятилетий развивающиеся страны добились значительного увеличения числа высококвалифицированных научных кадров в области сельского хозяйства. Мировые преобразования влияют на то, каким образом осуществляется научная деятельность. Технологический скачок произошел в настолько короткий период времени, что общее университетское образование, полученное десять лет назад, сегодня, скорее всего, устарело. Без возможности продолжать обучение без отрыва от производства, специалистам сельского хозяйства будет сложнее разобраться в возможностях, предоставляемых новыми технологиями. Более того, развитие села сейчас приобрело наиболее, чем когда бы то ни было, интегрированный характер, что, в свою очередь, обозначает, что аграрная наука должна искать пути расширения сферы своей деятельности и улучшения возможностей взаимодействия с другими дисциплинами. В то время как некоторые открытия удаляют нас от традиционных источников знаний, иные, напротив, возобновляют понимание и интерес к мудрости, заложенной в том, что передается из поколения в поколение. По мере того как традиционное и новое способствует зарождению новых систем знаний, и развивающиеся, и развитые страны пробуют создать организационные структуры, которые требуют от ученых работать в новых, не знакомых для них условиях.

Именно это и приводит к растущему спросу на высококвалифицированные руководящие кадры.

Одной из первоочередных задач ИСНАР является помощь в распространении передовых научных знаний от мирового научного сообщества к развивающимся странам. ИСНАР помогает малообеспеченным странам укрепить свой потенциал, воспользовавшись новыми технологиями, новыми методами и знаниями, способствующий увеличению благосостояния населения этих стран. В первую очередь, вступительная статья годового отчета ИСНАР дает определение понятиям «потенциал» и «наращивание потенциала». По ходу статьи рассматривается деятельность ИСНАР в развивающихся странах, направленная на укрепление научного потенциала в сфере сельского хозяйства на двух уровнях: организационном и индивидуальном.

## Что такое потенциал?

Термин «потенциал» может быть рассмотрен как возможность личности или организации нормально функционировать и добиваться поставленных целей. Таким образом, инициативы, направленные на «построение» или «укрепление» потенциала позволяют организации или конкретному лицу приобрести возможность самостоятельно решать поставленные перед ними задачи. Процесс наращивания потенциала, безусловно, схож с традиционным и более общим понятием развития, но различие в данном случае заключается в поставленных акцентах. Тогда как «развитие» в большинстве случаев подразумевает структурные изменения, под наращиванием потенциала имеется в виду познавательная деятельность организаций или личностей, которая приводит к улучшению функционирования и повышению производительности. В сельскохозяйственной науке процесс наращивания потенциала включает в себя программы, которые позволяют ученым улучшить свои трудовые показатели, а также функционирование исследовательской организации в целом.

Три важных критерия лежат в основе деятельности ИСНАР, направленной на наращивание научного потенциала развивающихся стран: многостороннее участие, научение (т.е. обучение в процессе выполнения) и внимание к своеобразию. Первое и второе обозначают, что сотрудничающие организации и личности являются полноправными участниками разработки, внедрения и оценки проектов по наращиванию потенциала. Для улучшения результата необходимо дать им возможность почувствовать себя на руководящем месте, там, где заключен контроль над темпами и направлением движения развития. Что касается своеобразия, опыт ИСНАР подсказывает, что каждый человек уникален и каждая научная организация отлична от любой другой. Вместо того чтобы попытаться найти решения, которые «по размеру» всем и каждому, программы по наращиванию потенциала предлагаемые ИСНАР ставят перед собой задачу помочь конкретным научным руководителям справиться с возникающими перед ними организационными проблемами.

# Краткие сведения

Предварительное анкетирование подтвердило, что **процесс глобализации оказывает влияние на сельскохозяйственный сектор развивающихся стран** и, вместе с этим, на то, каким образом функционируют национальные сельскохозяйственные исследовательские организации. Большинству из опрошенных организаций доступны современные информационные технологии: в их распоряжении находятся как электронная почта, так и электронные версии научных журналов и публикаций в глобальной сети Интернет.

После двухлетней поддержки со стороны ИСНАР Секретариат национальных сельскохозяйственных исследовательских систем готовится к самостоятельному функционированию. Посредством централизации знаний и потенциала секретариат в первую очередь выступает центральным защитником интересов и национальных сельскохозяйственных исследовательских организаций и выразителем их мнений в международной сельскохозяйственной среде.

**В 1999 году ИСНАР выпустила первый обучающий CD-ROM модуль.** Это позволит во много раз сократить затраты по распространению материалов, а также упростит использование и адаптацию учебных пособий инструкторами и учебными департаментами.

Вовлечение в исследовательский проект стран с различным уровнем внутреннего научного потенциала показало ценность подобной деятельности на примере шести стран Латинской Америки. Проект позволил также **расширить область деятельности ИСНАР, обратив большее внимание на полный цикл обработки продукции** в сравнении с исключительно производством (производство зерна, откорм скота).

ИСНАР отметила двадцатилетие своей службы международным сельскохозяйственным исследованиям **циклом радиопередач, который дал партнерам-представителям развивающихся стран возможность выразить свои взгляды** в отношении ценности сельскохозяйственных исследований и сотрудничества с ИСНАР.

Руководители исследовательским процессом в развивающихся странах **готовятся к более активной роли в деле сохранения мировых природных богатств.** Именно природные богатства являются подручным материалам ученых для выведения новых качеств в разновидностях растений. Их неисчерпаемость является залогом успеха отрасли сельскохозяйственных исследований.

Уже существует и действует программа **Мирового партнерства ИСНАР, включившая в себя 7 специалистов и готовящаяся принять в свои ряды еще 7 членов в начале 2000 года.** Они провели курс переподготовки кадров в Буркина-Фасо, Свазиленде, Мадагаскаре и Замбии. Члены партнерской программы приняли участие в миссии в Никарагуа и представили ИСНАР на международных совещаниях в Кении и Бразилии.

## Пример преобразования теории в практику на уровне организации

Одним из проектов, осуществление которого продолжается уже несколько лет и который воплотил в себе многолетний опыт ИСНАР, является Проект планирования, мониторинга и оценки (ПМО) сельскохозяйственных исследований в Латинской Америке и Карибском Бассейне. Выводы, сделанные на основе результатов исследований, показали, что проект сыграл важную роль в повышении способности конкретных специалистов планировать, следить за ходом и давать оценку сельскохозяйственным исследованиям. Научные руководящие кадры стали лучшим образом осведомлены, как именно правильное руководство может повысить исследовательский потенциал организации. Более того, стало очевидно, как интегрированный цикл ПМО послужит средством «организационного научения», т.е. позволит организации идти в ногу и реагировать на внешние темпы и направления развития.

В некоторых организациях в результате осуществления проекта удалось провести крупные структурные преобразования: решающая роль по осуществлению этих преобразований постепенно переходила в руки самих организаций; выполнив стоящую перед ней задачу, ИСНАР отходила на второй план, занимая место наблюдателя и наставника. Подобные успехи результатов исследований как, впрочем, и иной мировой опыт работы ИСНАР показывают, что возможно извлечь три урока в отношении создания и руководства программами по наращиванию потенциала. Во-первых, необходимо заменить термины «предполагаемые пользователи результатов исследований» и «объектное население» понятиями «партнеры» и «сотрудничающие стороны». Во-вторых, у организаций, проходящих стадию преобразований, необходимо стимулировать ответственность за свои действия и готовность довести процесс до успешного окончания. В-третьих, в процессе наращивания потенциала необходимо не только давать советы, но и действиями способствовать процессам преобразований.

Проект ИСНАР «Новая парадигма» продолжает начатое проектом ПМО. Это новая инициатива по укреплению концепции наращивания потенциала; основное внимание обращено на накопление умений по стратегическому управлению преобразовательными процессами и повышение организационной ответственности посредством всестороннего участия.

## **Наращивание индивидуального потенциала ученых: подготовка исследователей и руководителей**

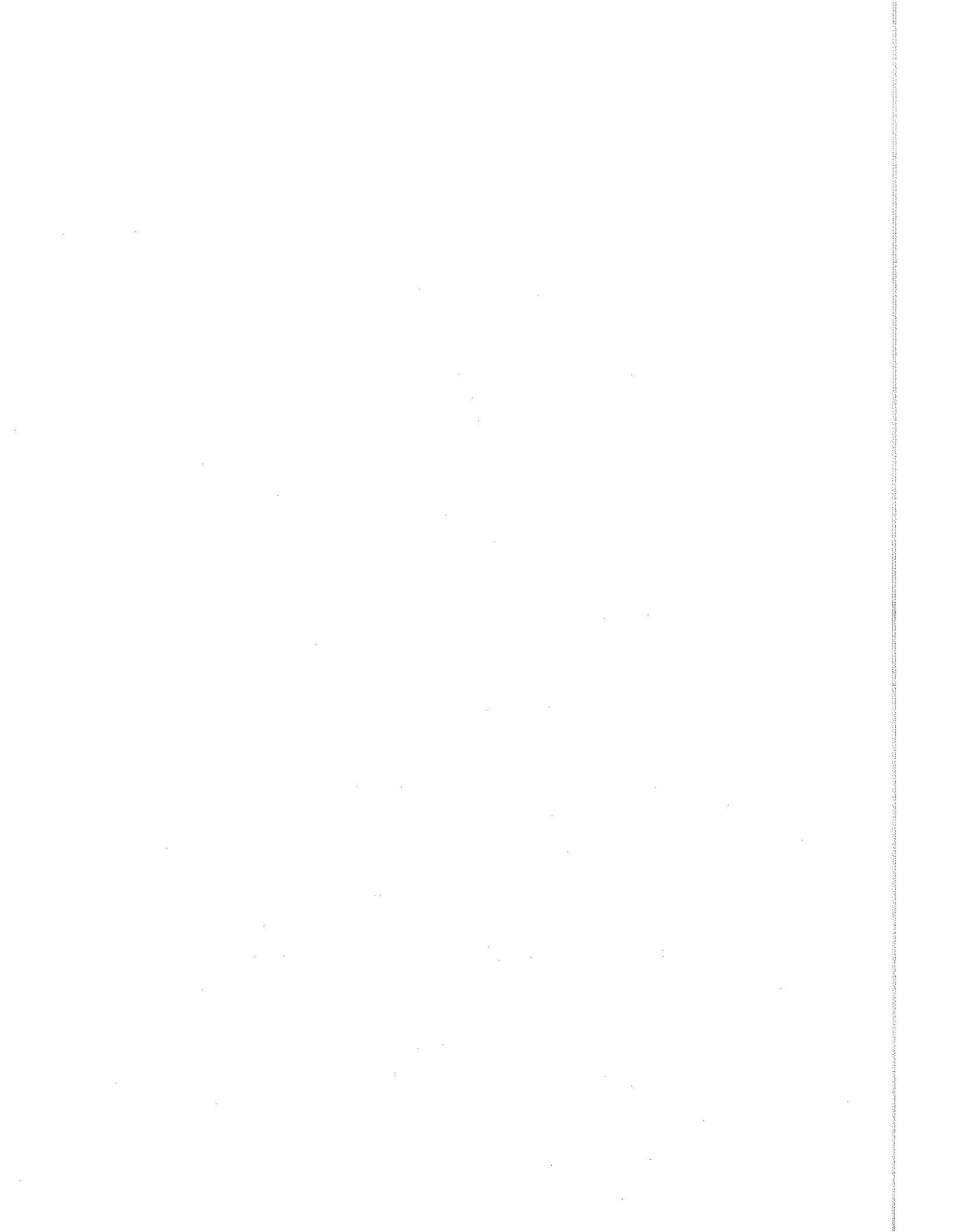
Одним из способов увеличения потенциала в развивающемся мире является осуществление переподготовки руководящего персонала без отрыва от производства и укрепление отделов по тренировке и переподготовке кадров в научно-исследовательских организациях. Огромное количество запросов о курсе переподготовки руководящего персонала подтолкнуло ИСНАР к единению опыта в создании ряда возможных к адаптации и легких в использовании обучающих материалов. Эти модули сконцентрированы на основных темах управления исследованиями и политике развития села: определение приоритетов исследования, управление информацией, гендерный анализ, создание убедительного научно-исследовательского предложения. При помощи обучающих модулей инструкторы и департаменты по переподготовке кадров имеют возможность использовать многолетний опыт ИСНАР по проведению научных семинаров, а также практические знания ученых, участвовавших в создании модулей.

Для успеха «эмпирического» обучающего подхода, ИСНАР необходимо понять требования к профессиональному развитию ученых и научных руководителей в развивающихся регионах мира и учесть особенности взрослого обучения. Модули, разработанные в ИСНАР, дают обучаемым возможность постоянно предельно внимательно рассматривать поставленные перед ними задачи и примерять то, что они изучают, в отношении конкретных жизненных и рабочих ситуаций.

ИСНАР стала инициатором интенсивной долгосрочной обучающей программы по подготовке управленческих кадров в регионе юга Северо-западной и Южной Африки (sub-Saharan Africa). Восьмилетняя программа по укреплению возможностей подготовки персонала в регионе Южной Африки была осуществлена совместно с Обществом развития Южной Африки и Институтом управления Восточной и Южной Африки и способствовала основать или укрепить отделы подготовки кадров в двадцати сельскохозяйственных исследовательских и образовательных заведениях региона. Тысяча девятьсот девяносто девятый был уже четвертым по счету годом существования группы подготовки IARC/NARS (так же носящей название «INTG») в качестве международной инициативы по наращиванию потенциала посредством обучения исследователей и руководителей стран региона южной части Северо-западной и Южной Африки (sub-Saharan Africa). В недавнем прошлом, при поддержке Африканского Банка развития, ИСНАР стала инициатором обширной программы по расширению возможностей безотрывного обучения в научно-исследовательских организациях десяти стран Западно-Африканского региона.

## **Каждый случай уникален**

Опыт ИСНАР показывает, что нельзя создать готовый проект по наращиванию потенциала. Как уникален каждый человек, так же и каждая организация уникальна. Организация должна следовать выбранным ею путем развития, черпая из собственного опыта, собирая ценные советы и идеи соседей и, при необходимости, пользуясь помощью со стороны. Наличие возможностей по переподготовке персонала без отрыва от производства, улучшенные системы управления процессами, подобным проекту ПМО, могут сыграть решающую роль в деле наращивания потенциала, который, в сущности, заключается в приобретении знаний и укреплении усилий с течением времени.



# أضواء على

## أضواء على أنشطة المركز

أكدت دراسة رائدة أن العولمة تحدث تحولات في القطاع الزراعي في البلدان النامية وكذلك في طريقة عمل مؤسسات البحوث الزراعية الوطنية. وقد استوعب معظم هذه المؤسسات النظام العالمي لتبادل المعلومات وأصبحت مرتبطة بشبكة الانترنت ويمكنها الوصول بصورة سريعة وغير مكلفة إلى المجالات والجرائد الإلكترونية عن طريق الانترنت.

تقوم أمانة نظم البحوث الزراعية الوطنية، بعد سنتين من الدعم الذي تلقتة من المركز الدولي لخدمات البحوث الزراعية (المركز)، بالاستعدادات اللازمة لكي تضطلع بمهامها بصورة مستقلة. وتقوم الأمانة بجمع المعلومات الموارد لتتيح بذلك سبل تعزيز مكانة مراكز البحوث الزراعية في المنظومة الدولية للبحوث الزراعية المتنامية.

أصدر المركز في ١٩٩٩ أول وحدة للتدريب في شكل قرص مضغوط قابل للقراءة فقط مما يتيح تخفيض تكاليف نشر مواد التدريب التي يستخدمها أو يكيّفها المدربون أو أقسام التدريب في البلدان النامية.

كان نهج الشراكة المتبع في المشاريع المتصلة بالبلدان ذات مستويات مختلفة مسن القدرات الداخلية ناجعا في إطار مبادرة لبناء القدرات في مجال إدارة البحوث الزراعية الصناعية في ستة بلدان من أمريكا اللاتينية. وساهم المشروع أيضا في توسيع نطاق عمل المركز من خلال التركيز على القيمة المضافة بدلا من الاقتصار على عمليات الإنتاج الأولية (الزراعة وتربية المواشي).

أشرف المركز، في إطار الاحتفال بعشرين سنة من تقديم الخدمات في مجال البحوث الزراعية، على سلسلة من البرامج الإذاعية التي أتاحت الفرصة للمساهمين من البلدان النامية فرصة الإعراب عن آرائهم بشأن الفوائد من البحوث الزراعية والتعاون من المركز.

يحشد المشرفون على البحوث في البلدان النامية جهودهم لأداء دور فعال في الحفاظ على الثروات الجينية القيمة المتاحة في كوكبنا. وتمثل هذه الموارد الأسس التي يستخدمها العلماء لتوليد أصناف جديدة من النباتات. وتوافر هذه الموارد باستمرار لأمر حيوي لنجاح البحوث الزراعية في المستقبل.

انطلق برنامج المنتسبين العالميين في المركز إذ انظم إليه لحد الآن ١٤ مسؤولا. وأشرف المنتسبون الأوائل على دورات تدريبية في بوركينا فاسو وسوازيلند ومدغشقر وزامبيا؛ وشاركوا في بعثة إلى نيكاراغوا؛ ومثلوا المركز في اجتماعات دولية في كينيا والبرازيل.

أشرف المركز كذلك على برنامج تدريبي مكثف طويل المدى في مجال التدريب على إدارة البحوث في أفريقيا جنوب الصحراء. وقد ساهم برنامج التدريب الرامي إلى تعزيز قدرات التدريب في أفريقيا الجنوبية على مدى ثماني سنوات، بالتعاون مع مجموعة تنمية أفريقيا الجنوبية ومعهد التدريب في منطقة أفريقيا الشرقية والجنوبية، في إنشاء أو تعزيز وحدات التدريب في ٢٠ مؤسسة للبحوث الزراعية أو مؤسسات للتدريب في المنطقة. علاوة على ذلك، ساهم المركز للسنة الرابعة في ١٩٩٩ في مجموعة التدريب المشتركة IARC/NARS، وهي مبادرة دولية لبناء القدرات من خلال التدريب لفائدة الباحثين والمشرفين في منطقة أفريقيا الجنوبية. وشرع المركز مؤخرا في برنامج واسع النطاق لتعزيز القدرات على التدريب في الخدمة لصالح المؤسسات العلمية في ١٠ من بلدان أفريقيا الغربية بمساعدة البنك الأفريقي للتنمية.

### خصوصية كل تجربة

تبين من خلال تجربة المركز أن عملية بناء القدرات لا يمكن أن تستند إلى نموذج واحد. فكل منا فريد من نوعه، وكذلك الحال بالنسبة للمؤسسات. وعلى كل مؤسسة أن تشق طريقها التنموي بالتعلم من تجاربها واستخلاص العبر من تجارب الآخرين والاستماع إلى نصائحهم القيمة واللجوء، عند الاقتضاء، إلى المساعدة الخارجية. إن القدرات الأساسية لتقديم التدريب في الخدمة، مشفوعة بنظم تدريب متقدمة مثل التخطيط والرصد والتقييم، يمكن أن تؤدي دورا مركزيا في عملية بناء القدرات التي هي في نهاية المطاف التعلم وبذل الجهود مع مرور الزمن.

الأنشطة في وقت ظل فيه المركز يقتصر على أداء دور المحفز والميسر. وإذا وضعنا هذا النجاح في سياق المشروع وتجارب المركز مع مؤسسات البحوث الزراعية في مناطق أخرى من العالم فإننا نستخلص ثلاثة دروس فيما يتعلق بوضع وإدارة برامج بناء القدرات. أولاً، يجب أن نستعمل مفهوم "المساهمين" أو "الشركاء" محل مفهوم "المستفيدين" أو "السكان المستهدفين". ثانياً، يجب السعي من خلال برامج بناء القدرات إلى إيجاد سبل امتلاك التغيير والالتزام به داخل المؤسسات المعنية. ثالثاً، لن يقتصر بناء القدرات على تقديم الأفكار بل يتجاوز ذلك ليتيح تيسير عملية التغيير على أرض الواقع.

يستند في مشروع المركز الجاري "النموذج الجديد" إلى مبادرة بناء القدرات على التخطيط والرصد والتقييم. وبذلك ينتقل مفهوم بناء القدرات نقلة نوعية إلى الأمام بالتركيز على بناء المهارات في مجال الإدارة الاستراتيجية للتغيير المؤسسي وعلى تعزيز الالتزام بالمؤسسة من خلال المشاركة.

#### *بناء القدرات من خلال تدريب الباحثين والمشرفين*

من بين السبل التي يسلكها المركز لبناء القدرات في مجال البحوث الزراعية في البلدان النامية تقديم التدريب في الخدمة على إدارة البحوث وتعزيز أقسام التدريب في المؤسسات العلمية. وقد حفز العدد المتزايد من طلبات التدريب على إدارة البحوث المركز على صقل خبراته وجمعها في عدد من وحدات التدريب ومواده التي تتسم بسهولة الاستعمال والتكيف. وتركز هذه الوحدات على المجالات الرئيسية في إدارة البحوث وسياسات التنمية القروية مثل تحديد أولويات البحوث وإدارة المعلومات وتحليل الأصناف وتحرير اقتراحات بحوث مقنعة. وباستعمال هذه الوحدات، يمكن للمدربين وأقسام التدريب الاستفادة من تجارب المركز الطويلة في مجال تنظيم حلقات العمل ومن خبرات الخبراء الذين ساهموا في إعداد هذه الوحدات.

يمثل فهم المتعلمين الكبار وتحديد حاجيات التأهيل المهني للباحثين والمشرفين على البحوث في المناطق النامية من العالم شرطين أساسيين لنجاح نهج المركز فيما يتعلق بالتدريب الذي يستند إلى التعلم من خلال التجربة. وتتيح وحدات المركز للمتعلمين فرصاً مستديمة لتحديد حاجياتهم بدقة والتفكير في ملائمة ما يتعلمونه مع حياتهم وعملهم.

عادة من مفهوم "التنمية" تغيير البنيات، يعتبر "بناء القدرات" وسيلة لاكتساب المعرفة من طرف الأشخاص أو المؤسسات بغية تحسين السلوك أو الأداء. وفي مجال العلوم الزراعية، يشمل بناء القدرات برامج تتيح للباحثين تحسين أدائهم في العمل، وكل الجهود التي تبذل لتحسين عمل وأداء مؤسسة البحوث بصفة عامة.

يقوم عمل المركز في مجال مساعدة الدول النامية على بناء قدراتها على البحوث الزراعية على ثلاثة ركائز أساسية: المشاركة، والتعلم من خلال الممارسة، واحترام التنوع. ومن خلال الركيزتين الأوليين، يعتبر المركز الأفراد والمؤسسات المساهمة شركاء كاملي العضوية في عمليات تصميم المشاريع الهادفة إلى تعزيز القدرات وتنفيذها وتقييمها. فيتعين عليهم أن يقدروا العملية ليؤثروا في وتيرة الأنشطة المخططة وتوجهها العام، أو ليغيروها لتكون أكثر نجاعة وفائدة. وفيما يتعلق بالتنوع، أدرك المركز أن كل شخص فريد من نوعه، كما أن كل مؤسسة تختلف عن الأخرى. فبدلاً من السعي إلى وضع وتنفيذ حلول عامة تنطبق على جميع الأفراد والمؤسسات، يتوخى بالأحرى من برامج المركز في مجال بناء القدرات الاستفادة من تنوع المعارف والتجارب للعمل مع المشرفين المحليين لوضع حلول فردية للمشكلات الإدارية التي يواجهونها.

### *من الركائز إلى الواقع الملموس على المستوى التنظيمي*

من المشاريع التي استوعبت هذه الركائز مشروع المركز الذي استغرق معظم سنوات العقد الماضي لتعزيز الكفاءات في مجال تخطيط البحوث الزراعية ورصدها وتقييمها في منطقة أمريكا اللاتينية والكاريبي. وتشير دراسات التقييم إلى أن المشروع ساهم مساهمة فعالة في بناء قدرات الأفراد على تخطيط البحوث الزراعية ورصدها وتقييمها. وتزايد الإدراك لدى المشرفين على البحوث بأن تحسين التدبير يساهم في تعزيز قدرات مؤسساتهم. بالإضافة إلى ذلك، بدؤوا يعون أن عملية التخطيط والرصد والتقييم المتكاملة الأبعاد يمكن أن تسخر في اكتساب المعارف داخل المؤسسة، أي تمكينها من مواكبة التوجهات الخارجية وما يتاح من فرص والاستجابة لها.

وفي بعض الحالات، أتاح المشروع تغييراً واسع النطاق على المستوى التنظيمي، حيث عاين المركز اكتساب هذه المؤسسات لمزيد من القدرات والمبادرات إذ بدأت تشارك في قيادة



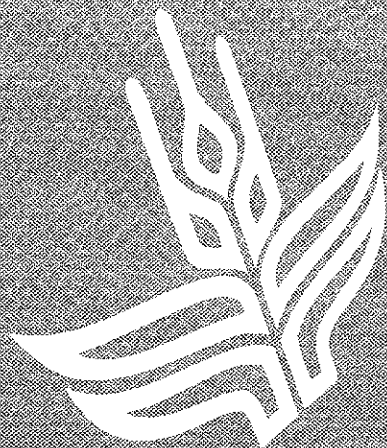
شهد العالم النامي خلال العقدين الماضيين تزايدا ملحوظا في عدد العلماء الزراعيين المدربين تدريباً جيداً. وتؤدي التغيرات الطارئة على الصعيد الدولي إلى تغيير طرائق تطبيق العلوم. وتطورت التكنولوجيا بوتيرة سريعة جدا إلى حد أن التعليم الجامعي الأساسي المحصل منذ عشر سنوات خلت غدا متقادما في وقتنا هذا. وما لم تتح فرص التدريب خلال الخدمة للعلماء الزراعيين فلن يكونوا على أتم استعداد لانتقاء أنجع الخيارات التكنولوجية المتبعة في ميدانهم. علاوة على ذلك، غدت التنمية القروية عملية أكثر تكاملا مما كانت عليه في الماضي مما يستدعي توسيع آفاق العلوم الزراعية واندماجها والعمل على مستوى متعدد الفروع والاختصاصات. وقد أدت الاكتشافات الجديدة إلى تجاوز المعارف القديمة والعنيفة وكذلك إلى العناية من جديد بجذور الحكمة والمعرفة الفطرية وتقديرها التقدير الذي تستحقه. فنشأت عن هذا التداخل بين المعارف المتقدمة والمعرفة الفطرية أنساق معرفية جديدة حذت بالدول النامية والدول المتقدمة على حد سواء إلى استكشاف طرائق مؤسساتية جديدة لم يحظ إلا القليل من العلماء بالتدريب عليها. ولهذا برزت الحاجة إلى زيادة التدريب في مجال إدارة البحوث.

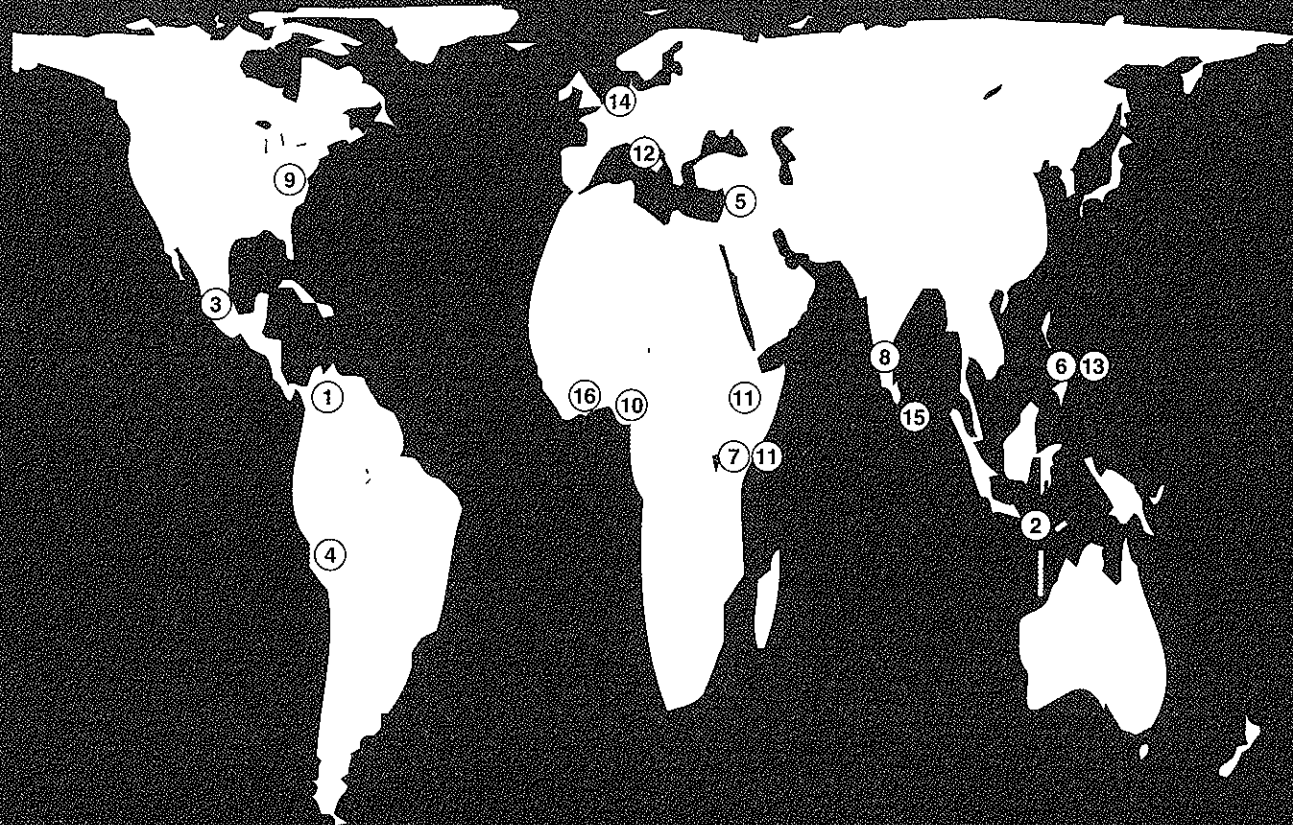
يضطلع المركز الدولي لخدمات البحوث الزراعية (المشار إليه فيما يلي باسم "المركز") بمهمة كفالة إشراك المجتمع العلمي الدولي العالم النامي في الاكتشافات العلمية المتقدمة. ويساعد المركز أيضا البلدان الفقيرة في تعزيز قدراتها على استعمال هذه التقنيات الجديدة وتسخير آخر الأدوات والمعارف لتحسين رفاه سكانها. ويعرض هذا الموجز لتقرير المركز السنوي عن عام ١٩٩٩ للمقصود من كلمة "القدرات" وعبارة "بناء القدرات". ويتطرق بعد ذلك إلى السبل التي يسلكها المركز من أجل تعزيز قدرات الدول النامية في مجال البحوث الزراعية على مستويين: المستوى التنظيمي والمستوى الفردي.

ما المقصود من كلمة "القدرات"؟

يمكن اعتبارات "القدرات" على أنها قدرة فرد ما أو مؤسسة على العمل بصورة ناجحة وتحقيق الأهداف. وعليه فإن المبادرات الرامية إلى بناء القدرات أو تعزيزها تتيح للأشخاص أو المؤسسات ذاتها تحديد المشكلات وإيجاد الحلول لها. ولئن كان هناك نوع من التشابه بين بناء القدرات والمفهوم التقليدي والعام للتنمية، إلا أن ثمة اختلافا كبيرا في التوجه. ففي حين يقصد







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. ICARDA      International Center for Agricultural Research in the Dry Areas, Aleppo, Syria
6. ICLARM      International Center for Living Aquatic Resources Management, Manila, Philippines
7. ICRAF      International Centre for Research in Agroforestry, Nairobi, Kenya
8. ICRISAT      International Crops Research Institute for the Semi-Arid Tropics, Patancheru, India
9. IFPRI      International Food Policy Research Institute, Washington, DC, USA
10. IITA      International Institute of Tropical Agriculture, Ibadan, Nigeria
11. ILRI      International Livestock Research Institute, Addis Ababa, Ethiopia/Nairobi, Kenya
12. IPGRI      International Plant Genetic Resources Institute, Rome, Italy
13. IRRI      International Rice Research Institute, Los Baños, Philippines
14. ISNAR      International Service for National Agricultural Research, The Hague, Netherlands
15. IWMI      International Water Management Institute, Colombo, Sri Lanka
16. WARDA      West Africa Rice Development Association, Bouaké, Côte d'Ivoire

## About ISNAR

### Mission

The **International Service for National Agricultural Research (ISNAR)** assists developing countries in improving 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.

### Impact

To maximize the impact of its work in developing countries, ISNAR focuses on three objectives:

- **enhancing the capacity of agricultural research organizations** to respond to their clients' needs and to emerging challenges
- **expanding global knowledge** on agricultural research policy, organization, and management
- **improving developing countries' access to knowledge** on agricultural research policy, organization, and management

### Background

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 its headquarters in The Hague, the Netherlands, on September 1, 1980.

ISNAR is a nonprofit autonomous institution, 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 16 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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