consultative group on international agricultural research
technical advisory committee and CGIAR secretariat

report of the
second external program and management review
of the international service
for national agricultural research
(ISNAR)
This report comprises:

(a) Extract from: "Summary of Proceedings and Decisions", CGIAR Mid-Term Meeting, Instanbul, Turkey, 19-22 May 1992

(b) Letter from TAC Chairman and CGIAR Executive Secretary, transmitting the Report of the Second External Program and Management Review

(c) Commentary on the ISNAR’s External Review
   (i) TAC Commentary on the External Review of ISNAR
   (ii) CGIAR Secretariat Commentary on Management

(d) ISNAR’s response to the Report of the Second External Program and Management Review

(e) Transmittal letter from Panel Chairman to TAC Chairman and CGIAR Executive Secretary

REPORT OF THE
SECOND EXTERNAL PROGRAM AND MANAGEMENT REVIEW
OF THE
INTERNATIONAL SERVICE FOR NATIONAL AGRICULTURAL RESEARCH
(ISNAR)

TAC SECRETARIAT
FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

September 1992
ISNAR - External Reviews 1/

The Group discussed an external review of ISNAR conducted by a panel chaired by Mr. John Lewis.

The panel’s report emphasized the need to strengthen national agricultural research systems in developing countries and the importance of ISNAR’s role in this context. The report suggested, however, that the range of ISNAR’s tasks exceeds the size of the institution.

Accordingly, the report advised ISNAR to be selective about initiating new activities, as well as about the nature and intensity of its relations with different national systems. The report urged that in order to achieve maximum impact ISNAR should pursue activities with potential multiplier effects.

The report said as well that ISNAR should increase its efforts to integrate its institution building and training programs with the research collaboration programs of other CGIAR centers.

The report recommended that ISNAR’s core funding should be increased by not less than $2 million in 1993 with some continuing growth thereafter.

Mr. Lewis, who introduced the work of the panel and its report, told the Group that although the panel had some criticisms to make of ISNAR, its overwhelming finding was a very positive overall assessment.

---

The panel began its work with some scepticism and with critical expectations of ISNAR. As it went deeper into its task, the panel reached the conclusion that ISNAR was a very effective institution for this stage in its development.

Mr. McCalla, commending the review panel's report, agreed with the panel's view that the nature and intensity of ISNAR's relations with national systems involved complex and difficult decisionmaking issues.

For this reason, he pointed out, ISNAR's role as a research based service, as opposed to purely a service organization, needs to be continuously reviewed and clarified. The nature of ISNAR's linkages with other CGIAR centers such as, for instance, IFPRI and IIMI, also needed elaboration.

Referring to the recommendation that ISNAR's core budget should be increased by $2 million, he said that the appropriate time for ISNAR to make that request would be during the five-year program and budget process. TAC, meanwhile, was not passing judgement on the recommendation.

ISNAR's Board Chairman Mr. John Dillon said that the center had already endorsed 16 out of the 17 recommendations in the review panel's report. It had after very careful consideration rejected the recommendation that the center's Program Committee should not be a "committee of the whole" (of the Board).

The Group was informed, meanwhile, that the ISNAR Board had increased its size from 12 to 14 members.

Responding to the panel's view that ISNAR should weigh the pros and cons of relocating the center's headquarters, Mr. Dillon reported that center management studied this issue quite exhaustively. It found, on balance, that there would be no net benefit in relocating ISNAR.

ISNAR's Director General Mr. Christian Bonte-Friedheim thanked Mr. Lewis and panel members for a helpful report which contained both commendations and criticism.

He further thanked his colleagues at ISNAR for their contribution to the work of the review panel by way of background material and information.

For an institution as small as ISNAR, the tremendous amount of work required for the review process usually involved some interruption of day-to-day operations. ISNAR staff put in an extra effort, however, and did not disappoint any of its developing country partners while preparing for and participating in the review exercise.
ISNAR appreciated the comments made by developing country researchers to members of the review panel. Their praise demonstrated the impact of ISNAR’s work.

Mr. Bonte-Friedheim, while responding in detail to the various comments made by the review panel, provided the Group with an encapsulation of the center’s planned thrusts and programs in coming years.

ISNAR will target its services on the needs of national systems at varying stages of development, will cover a wide range of research policies, will forge strategic alliances with other organizations and will seek multipliers to increase the impact of its work, he said.

Pointing out the essential role played by ISNAR, Mr. Bonte-Friedheim argued the case—also made by the review panel—for a greater allocation of resources.

Members of the Group complimented the panel on its work, and commended ISNAR for continuing to help developing countries to build up their national research capacity.

Several participants referred to the complexities of the tasks faced by ISNAR, given the fact that national systems were at different stages of development and that there were many actors involved.

They agreed that ISNAR should strengthen and diversify its linkages. The fact that ISNAR was collaborating with FAO, a CGIAR cosponsor, was commended. Urging the development of other linkages, it was suggested that ISNAR might undertake special projects to draw farmers into the process of setting priorities for agricultural research.

The point was also made that in addition to working with universities and other institutes of tertiary education, ISNAR should work more closely with the private sector, with professional organizations and with nongovernmental organizations.

At the conclusion of the discussion, the Chairman noted agreement on the following points:

- The Group endorsed the main thrust of the review panel’s report;
- The Group appreciated the thoroughness with which the review was conducted and thanked Mr. Lewis for his leadership;
• The Group noted that ISNAR’s response to the report is positive and that it had made good progress with the implementation of most of the panel’s recommendations;

• The Group endorsed a decision by ISNAR to increase the size of its Board from 12 to 14 and, by implication, endorsed the corresponding amendment to ISNAR’s constitution.

The chairman said he was confident that ISNAR, a vibrant organization, would incorporate the comments and suggestions made at MTM92 as it continued its follow-up activities based on the external review.
Dear Mr. Rajagopalan,

We are pleased to submit to you the Report of the Second External Review of ISNAR which was conducted during July 1991 by a Panel chaired by Dr. John Lewis of the United States of America. The Review Report and the Response of the ISNAR Board of Trustees were discussed by TAC at its 56th meeting in October 1991 in the presence of Dr. Lewis. ISNAR was represented at the meeting by Dr. John Dillon, Chairman of the Board, Dr. Christian Bonte-Friedheim, Director General and other senior management staff.

The Review was conducted through a single Panel with both programme and management expertise. Like other recent reviews, the Panel has prepared a single integrated Report. This approach has proven to be successful in streamlining the review process and will be adopted in most future reviews in the CGIAR.

This letter has two attachments in addition to the Panel’s Report. The first contains the TAC Commentary, which is TAC’s reaction to the Panel’s Report and the ISNAR response, and a Commentary from the CGIAR Secretariat, which is concerned specifically with management aspects of the Review. The second attachment is the Response of ISNAR to the External Review.

The Review underlines the importance of ISNAR’s role in strengthening National Agricultural Research Systems and comments favourably on the progress ISNAR has made in this regard. The Panel’s recommendations and suggestions provide valuable advice to ISNAR on how to make improvements in its effectiveness and efficiency. ISNAR has moved quickly to implement a number of the changes suggested and is in the process of finalizing a new strategic plan which addresses many of the issues raised by the Panel.

Mr. Visvanathan Rajagopalan
CGIAR Chair
World Bank
1818 H Street, N.W.
Washington, D.C. 20433
USA
We recommend continued support of ISNAR by the CGIAR. ISNAR will be stronger as it implements the recommendations of this Review, and even better placed to fulfil its important mission of strengthening its NARS partners.

Yours sincerely,

Alex McCalla
Chairman, TAC

Alexander von der Osten
Executive Secretary, CGIAR
TAC Commentary on the External Review of ISNAR

TAC is grateful to Professor John Lewis and his Panel for the concise and insightful report of the External Program and Management Review of ISNAR. The Panel addressed a number of key programmatic and management issues of the institute at a critical time in its development and the evolution of the CGIAR System. In general TAC endorses the views and recommendations of the Panel on ISNAR’s governance, strategy, programs, management, and external relations.

TAC notes that ISNAR was in the process of revising its strategic plan at the time of the external review. Reviews of other CGIAR Centers have been hampered by the absence of a Board-approved strategic plan. However, the Panel felt that it had sufficient information about ISNAR’s plans to make a thorough assessment of the institute’s strategy and programs. Furthermore, ISNAR is utilizing many of the findings of the Review Panel in the draft of its strategic plan which has been made available to TAC. Therefore TAC considers that it is not necessary to retain the Review on its agenda until the strategic plan is finalized. TAC encourages ISNAR to proceed with the finalization of its strategic plan, consulting with NARS and others as appropriate.

The Review Panel’s analysis of the program and management of ISNAR has identified a number of important issues some of which have system-wide implications. While the tone of the general conclusions of the Panel is positive, there are many specific criticisms and suggestions not followed up with formal recommendations. TAC is pleased to note that ISNAR has endorsed all but one of the recommendations of the Review Panel and that the institute has already taken action on some of them. Further, based on a letter of October 2, 1991, ISNAR indicates that it endorses nearly all of the other specific suggestions made in the Panel report.

In light of the report of the Review Panel and the response of the ISNAR Board of Trustees, TAC offers the following commentary.

Strategic Planning

The Report emphasizes that the size of ISNAR’s task far exceeds its size as an institution. TAC supports the Panel’s call for selectivity and a systematic approach to deciding the nature and intensity of ISNAR involvement with NARS partners. In particular, the emphasis in the Panel report on multipliers is important and appropriate.

On a related issue, TAC considers that ISNAR might find it useful to expand to other regions its study of the role and effectiveness of networks in WANA. Such a
study could be useful in its own strategic development as well as providing valuable information on this topical issue for the rest of the CGIAR System. This issue is particularly critical as the new Centers enter the System, since several of them emphasize network activity.

The Panel clearly articulated its understanding of ISNAR's role as a research-based service responsible to the needs of its NARS partners. However, this central issue does require further elaboration and clarification. ISNAR should include in its strategic plan an analysis of how the different program areas should evolve with time. In particular, the role of research within each area should be considered explicitly in relation to other activities.

ISNAR, as a service organization, largely operates in response to requests. Nevertheless, a case can be made for the institute to be selectively proactive. Further, TAC notes from ISNAR's response that the current high allocation of resources to Africa is being reduced in relative terms as ISNAR expands its relative emphasis in other regions.

Research Organization and Management

The Review Report raises concerns about staff morale which the Board and Management need to address. Various causes of the low morale have been cited, including the inadequate organizational structure as the institute grew larger, the gulf between the two cultures - experienced, field-oriented agricultural scientists vs. relatively young, academic social scientists - and the delays in implementing changes between the time of appointment of the new Director-General and the postponed external review. Whatever the causes, TAC urges the institute to continue its efforts to resolve morale issues, to implement the reorganization recommended by the Panel and to improve human resource management in the institute along the lines suggested in the Review Report.

External Relations

TAC endorses the "NARS first" approach adopted by ISNAR. Furthermore, TAC notes the Panel's recognition that ISNAR should not play an intermediary role in interactions between NARS and CGIAR centers. However TAC believes that in a time of constrained budgets in the CGIAR System, ISNAR should, as the Panel suggests, make more effort to integrate its institution building and training programs with the more specific research collaboration and component building activities of the commodity- and ecology-based Centers. The need for in-country collaboration is, in fact, a system-wide need and one which also has to be addressed by other Centers. In this regard the evolution and implementation of the ecoregional approach to research in the CGIAR will provide an excellent opportunity to develop coordination mechanisms for Centers. TAC supports the Panel's recommendation that ISNAR experiment with outposting staff to ecoregional Centers to facilitate this coordination. This should not be allowed to jeopardize ISNAR's bilateral relationships with NARS.
TAC is pleased to note that ISNAR has developed its collaboration with FAO in supporting and strengthening NARS and hopes that the collaboration will continue to evolve, utilizing the special competence of each to the best advantage. TAC also is pleased to note that ISNAR has established a working group to reassess the headquarters location issue, as suggested in the Panel report.

Training

TAC notes that training is a vitally important part of ISNAR's efforts to strengthen NARS. TAC generally supports the Panel's comments on the training programme. The institute clearly engages in a number of short-duration activities which are more sensitization rather than management training. In these types of activities it is important to involve policy-makers. TAC also believes that the fellowship system for middle-management NARS personnel, recommended by the previous external review, should be given higher priority by the institute.

Governance

TAC is concerned about the ISNAR Board's response to the Panel's discussion and recommendations concerning the size of the Board and its Program Committee. The previous external review recommended that the size of the Board be reduced from 15 to 11, in response to which the Board was reduced to 12. Enlarging the Board increases the cost and may introduce some inefficiencies. Keeping the whole Board on the Program Committee compounds these problems. If the Board is being increased to include further donor representation, questions of the independence of the Board arise. TAC is not convinced of the grounds for increasing the size of the Board beyond 12 members.

Conclusions

In the view of the Panel, ISNAR emerges from the Review as a strong and credible organization with a big task ahead of it. The Panel recommends that the core budget of the Centre be increased by at least $2 million. TAC notes however that a detailed case to justify this is not given in the report. Whether or not the increased resources recommended by the Panel become available, the Review Report recommends and suggests a large number of useful mid-course adjustments in the Institute's program and management. TAC generally endorses both the formal recommendations and the other numerous suggestions. TAC believes that if these are acted upon, ISNAR is well placed to improve its performance.
CGIAR Secretariat Commentary on Management

CGIAR Secretariat joins TAC in complimenting the External Program and Management Review Panel for its analysis of ISNAR. The review shows that ISNAR has implemented fully or partially all 29 recommendations of the 1985 External Management Review. It also shows that the center was well prepared for this review. The quality of the background materials prepared was excellent, and the attitudes of the center management and staff and the Board towards the review were positive. These facilitated the conduct of the review and turned it into a highly collaborative exercise.

Management Effectiveness of ISNAR

Overall, ISNAR is found to be a well managed institution and several aspects of management have received good marks. The Board is thought to be functioning well, the center has been led skillfully over the last six years by its Directors General (and their deputies), the center has experienced staff and good physical facilities, and the administrative, financial and information systems introduced during the period appear to be effective.

Counterbalancing these, the Panel's report portrays an institution with some uncertainty about its future. ISNAR's strategy and program are undergoing a serious examination, its organizational structure is changing, there is low morale among the staff, and, according to the Panel, there is a mismatch between the task ahead of ISNAR and its financial means to carry it out.

The Panel provides much food for thought in these and other areas by building on ISNAR's own thinking. We comment below on some of the management-related suggestions of the Panel.

Staff Mix

The Panel finds ISNAR's current staff mix one of its weak spots. For an institution working on management problems, the number of staff with management science expertise is judged to be low. The same comment is made about the Board. The Secretariat endorses the Panel's view that eliminating this bias would most likely enhance the quality of ISNAR's (and the Board's) work.

The Board of Trustees

As noted above, the Panel finds the Board to be functioning well, despite the need to strengthen its competence in the management area. The sole recommendation of the Panel not endorsed by the Board has to do with reducing the size of the Program Committee, which now functions as a committee of the whole.
The Board argues that all Board members should be allowed to "play an active oversight role vis-a-vis ISNAR's program."

Other board committees will most likely function better if all their members have a thorough understanding of the programmatic aspects of ISNAR's operations. Yet, having the full Board serve as the Program Committee could lead to some inefficiency in use of time because all Board committees cannot meet simultaneously. It seems that these tradeoffs can be made best by the Board itself, in full awareness of the strengths, weaknesses and needs of its membership.

ISNAR's Constitution requires that amendments to its fundamental provisions, including the size of the Board, require approval by the CGIAR. At its meeting which followed the review, the Board decided to increase its size from 12 to 14 members. In commenting on the size of the Board, the Panel had noted that "a small increase in the size of the Board may be justified" (page 20). The Secretariat recommends that the CGIAR endorse the Board's decision and the required change in ISNAR's Constitution.

Organizational Structure

The Panel's recommendations and their endorsement by the Board suggest that the flexible structure of the past is on its way out, in favor of a more formalized, hierarchical arrangement, with a clearly identified middle management. While this may be inevitable in the light of the growth in the size of the staff, the pendulum should not be allowed to swing completely the other way because excessive differentiation could make integration a much more difficult task.

The Question of Relocation

The Panel recommends that "during the next three years the Institute's management and board consider very carefully the pros and cons of relocation—probably to a developing country" (page 17). This recommendation follows enumeration by the Panel of the various difficulties and costs associated with a Dutch location. The Board has set up a sub-committee to carry out such an examination, which makes sense in the light of the difficulties currently faced by ISNAR and the current financial environment within the CGIAR.

Additional Funding for ISNAR

The Panel makes a specific recommendation about ISNAR's core funding, calling for an increase "by not less than US$ 2 million in 1993 with some continuing growth thereafter" (page 97). This recommendation is illustrative of the Panel's high regard for ISNAR's past achievements and potential for future impact. The question of additional funding should be examined in the context of ISNAR's next medium-term
plan, which will follow the completion of its long-term strategy, and CGIAR-wide resource allocation processes.

Conclusions

The Secretariat recommends that the CGIAR endorse the main thrust of the suggestions and recommendations of this review. As for special action to follow up the review, the Secretariat agrees with TAC that there is no need for a special mechanism.
ISNAR would like to record its profound appreciation for the professionalism, sincerity, understanding, and hard work of the external review team, and for the report's observations and recommendations. Our appreciation for the team includes the contributions of the secretariat staff from the CGIAR and TAC. The willingness, understanding, and frank discussions of ISNAR's many partners, especially the leaders and policymakers of national agricultural research systems (NARS) in eight developing countries, as well as the views of the leadership of FAO also contributed greatly to the work of the team and are especially acknowledged.

The External Review report acknowledges the importance of ISNAR's mandate and it strongly supports the continuation and further strengthening of ISNAR's services to NARS. The report recognizes the past achievements of ISNAR's three programs, while underlining the need for further improvement. The panel's strong recommendation for additional financial resources is interpreted not only as a recognition of the growing needs of NARS for assistance but also as a vote of confidence in, and a recognition of ISNAR's increasing services to NARS and also within the CGIAR system.

The report contains 18 formal recommendations. As detailed in Part II, below, ISNAR endorses most of the recommendations, and implementation of several is already underway. ISNAR has also identified many less-formal proposals and suggestions contained in the report, and we are responding to them in appropriate ways. For each of the next three years, the Board will review progress in implementing the External Review recommendations, proposals and suggestions.

The Panel has commented favorably on key elements of ISNAR's revised strategy. Because the basic program is seen to be strong, it is recommended that most ongoing work continue and, in some areas, be strengthened.

During the last six years ISNAR has grown and matured, making it now opportune to introduce a new organizational structure with middle management. Appropriately, the review panel has emphasized issues and options, rather than prescriptions. The report comments on a certain historical tension at ISNAR between those working principally in research and those in advisory services. This tension between research and extension is a classic one and may be, in part, inevitable. ISNAR must be both research- and experience-based.

Given the rapid growth of research and training in the six years since the last review and given the significant changes in staff composition, mutual adjustment has been necessary. A new program structure is being implemented which will guarantee the integration of training, research, and information in ISNAR's advisory services work. The period of rapid change has passed, and we believe that a stabilization of staffing and implementation of the proposed management structure will both reduce tensions.
The success of ISNAR's collaboration and advisory work with NARS in diagnostic reviews, planning, and strengthening management is recognized in the report. It is noted that ISNAR responds to requests from national systems. It provides a neutral source of technical advice and has purposely sought to leave implementation of major technical assistance programs to other agencies. The advisory work has drawn on research results and has been closely linked with training. Past progress has been the result of constructive interaction between the three programs.

The report deals in several places with outposting of staff. ISNAR has already examined this issue on several occasions, usually in terms of outposting to national systems. The current document discusses outposting to regional entities. Outposting offers some potential advantages, both logistic and programmatic. However, some key questions remain: Are regional entities seen by NARS as the preferred mode of collaboration for ISNAR to meet their needs? Can an outposted officer provide the expected range of skills desired or would the role become purely representational? What would be the impact on ISNAR's already small headquarters program if resources were diverted to serve in a number of regional and sub-regional entities? ISNAR will prepare a position paper on this rather complex subject.

The report discusses some of the issues of assessing the impact of institutional development activities, and, in reflecting the views of many NARS, gives a generally favorable assessment of ISNAR's achievements and impact. In the future, ISNAR will give special consideration to establishing evaluation and impact assessment guidelines for its various activities, as well as to assisting NARS to assess their own impact.

ISNAR's revised strategy, being prepared in consultation with various partners, will also deal with a number of important questions raised in the report. Its Medium-Term Plan, associated with this strategy, will outline ISNAR's resource constraints and program priorities. Without substantial additional resources, it will be difficult to meet the challenges and to satisfy the increasingly diversified needs of national systems. Therefore, the Panel's recommendation that ISNAR receive increased future funding seems most appropriate.
Part II. RECOMMENDATIONS

Recommendation 3.1. The Board should always have in mind that several members of the Board at any time should have experience and expertise in agricultural research management.

Endorsed

The Board endorses this principle, and would like to note that a number of its members have experience in agricultural research management. Recently a senior agricultural research manager from Malaysia has been elected to the Board. The Board will also continue to make use of the CGIAR’s Candidate Information System.

Recommendation 3.2. The Board should give serious consideration to reducing the size of its Program Committee.

Not endorsed

The issue of the size of the Program Committee has been discussed, and the Board has decided that the Program Committee should maintain its present size, the same as the full Board, in order to allow all Board members to play an active oversight role vis-a-vis ISNAR’s program.

Duties will be allocated within the Program Committee to increase its effectiveness. The matter will be taken up by the Program Committee at its next meeting.

Recommendation 4.1. ISNAR should take appropriate steps to involve the NARS early on in the process of strategic planning.

Endorsed

ISNAR is involving NARS leaders in the process of revising its strategy, through questionnaires, workshops, meetings, and special consultations. It is expected that the draft revised strategy will be discussed in three regional meetings involving NARS leaders.

Recommendation 4.2. ISNAR should develop a more effective scheme for setting priorities among countries and regions according to the stage of development and needs and opportunities of the different NARS.

Endorsed

The new strategy and the medium-term plan will deal with the issue of ISNAR’s future priorities.
Recommendation 5.1. There should be one Deputy Director General (as the structure is being significantly changed, this should be recognized as a new position, internationally advertised).

Endorsed

Under the present organizational structure two Deputy Directors General are serving ISNAR well. In the new structure one incumbent Deputy Director General will assume specific responsibilities and, together with the Director General, lead ISNAR. If the post becomes vacant at some time in the future, the terms of reference will be reviewed and standard international recruitment procedures will be followed to fill this very important position.

Recommendation 5.2. Three or four Program Directors should be introduced with line responsibilities for staff and budgetary authority.

Endorsed

In line with the implementation of ISNAR's new structure and organization, middle-level management will be introduced.

Recommendation 6.1. ISNAR should promote an institutional approach, as distinct from an individual approach, to the measures required to strengthen the NARS that seek its advisory services; in this regard, more attention should be given to synthesizing ISNAR's country experiences.

Endorsed

In the preparation of necessary background material for the 1991 external review, considerable effort went to synthesizing ISNAR's experiences in a number of countries. In future, such work will be undertaken (a) during the internal program review exercise held annually, (b) for large programs every two to four years, and (c) for the preparation of each quinquennial external review.

ISNAR's traditional advisory service work with NARS will be further strengthened through the introduction of small internal task forces for all major country programs. These task forces will guarantee both teamwork and an institutional approach and will facilitate the integration of advisory services, research, and training.
**Recommendation 6.2.** ISNAR should more systematically address the important role of universities and schools of agriculture in developing-country NARS.

Endorsed

In August 1990, ISNAR prepared a special project dealing with "Universities and National Agricultural Research in sub-Saharan Africa". It was circulated to more than 12 donors; other potential donors were also informed of its existence. ISNAR will continue its efforts to obtain financing for this special project. In ISNAR's draft revised strategy, universities are recognized as an important target group, and agricultural research organizations are encouraged to tap their expertise.

**Recommendation 7.1.** ISNAR could appropriately direct some of its research effort to the study of the experiences of agricultural research management in other countries than those in which it has worked -- both selected developed countries and some of the larger and/or more technically sophisticated developing countries.

Endorsed

In the first decade of its existence, ISNAR concentrated on providing assistance to the relatively smaller and less-developed NARS in most need of management improvement. ISNAR has gained knowledge of agricultural research management in other countries through recruitment of experienced individuals. The resources needed to systematically study agricultural research management in larger or more-advanced NARS have not been available. In the meantime, information on experiences in the larger and more-developed systems is being obtained through a few selected studies and through literature review and personal contacts.

**Recommendation 7.2.** In determining its research priorities, ISNAR should give more weight to the research needed by the advisory service to provide appropriate management tools for NARS.

Endorsed

ISNAR's proposed new structure and strengthened annual planning and review mechanisms aim to strengthen the demand orientation of all of ISNAR's work and to ensure that the advisory service requirements are reflected in ISNAR's research agenda.
Recommendation 8.1.
The Training Unit should be given the responsibility and authority to ensure that basic procedures for training are followed for all ISNAR training events, and that procedures for monitoring and evaluation of training events are established.

Endorsed

ISNAR's small training unit will be involved in all training events, so that basic standard training procedures are followed. Since 1990, procedures for monitoring and evaluation have been established and are being applied for most events. Follow-up evaluation of participants of selected training events is planned.

Recommendation 8.2.
ISNAR should actively pursue a training strategy that emphasizes a multiplier effect by developing training packages that can be used by intermediary institutions, or used in a region through a network of competent trainers who can begin to provide much of the direct training services to middle-level managers in NARS.

Endorsed

In future, greater emphasis will be placed on development of generic training modules that can be used by other training institutions. Recently ISNAR has established links with two educational institutions. The University of Arkansas will use guidelines for planning and design of research buildings, developed through an ISNAR special project, in its training courses for research managers in developing countries. ISNAR and the University of London/Wye College also plan to develop a human resource management module, which will be used in the college's Distance Learning Programme.

ISNAR is actively seeking to establish links with other intermediary institutions and trainers who can disseminate management tools widely among regions and NARS. This effort also seeks to develop training materials in various languages and adapted to different environments.

Recommendation 9.1.
ISNAR should review and rationalize its Publications Policy, so that its publications are appropriate for ISNAR's goals, especially the goal of serving the needs of its primary clients: NARS leaders and managers.

Endorsed
Recommendation 9.2. A new Publications Committee should be established with the authority to control quality and enforce ISNAR's Publications Policies and Procedures.

Endorsed

In early 1991, ISNAR engaged a consultant to review its publications policy. A new Publications Committee will be established with new and precise terms of reference. The Publications Committee will monitor quality-control procedures and advise the Director General on publications policy and procedures and on their implementation.

Recognition of the principal need of serving the NARS will be included in the revised terms of reference of the Publications Committee.

Recommendation 9.3. The Head of the Publications Unit should be given managerial authority over its operations, including its own budget.

Endorsed

Recommendation 10.1 ISNAR should establish guidelines for staff assessment/rewards that reflect the changes to be introduced in the organizational structure and reinforce institutional goals.

Endorsed

The Board has requested the Director General to submit revised guidelines for staff assessment, for discussion at its next meeting.

Recommendation 10.2. The Director General should play a greater role in the guidance and oversight of human resource planning, management, and development at ISNAR.

Endorsed
Recommendation 13.1. CGIAR, recognizing the central role of ISNAR in institution building, should increase its actual core funding by not less than $2 million in 1993 with some continuing growth thereafter.

Endorsed

ISNAR is aware of the scarcity of resources for agricultural research, and specifically for the CGIAR system. However, we believe that there is very strong justification for additional funding. In recent meetings, TAC has reemphasized that stronger NARS are essential, also for the CGIAR to achieve its goal. TAC has declared the need for placing higher priority on institutional development of NARS.

With the expansion of the CGIAR to include natural resource management, forestry and aquaculture, ISNAR will be called upon to assume more responsibilities, and the potential payoffs to NARS and to the CGIAR will increase. ISNAR, a very young CGIAR Institute, has a current core budget of around US$7 million -- less than 3% of the CGIAR total. This is far below the amount that would be optimal. Hence, additional investment in ISNAR's program would be highly beneficial for the CGIAR as a whole. We trust that TAC will address this serious imbalance in resource allocation within the CGIAR system in responding favorably to this recommendation of the External Review panel.
Dear Alex and Alexander,


As the Report shows, we are convinced that the strengthening of National Agricultural Research Systems (NARS) is a vital task, central to the mission and goals of the CGIAR. The timing of our review of ISNAR therefore has turned out to be particularly opportune, given the importance ascribed to the strengthening of NARS in recent TAC and CGIAR discussions about the future of the CGIAR system.

As ISNAR enters its second decade, the Institute faces many new challenges that the report tries to address. ISNAR is in process of revising its strategic plan in a forward-looking way. In a formal sense, the chronological overlap between its revised planning and our review exercise may have been awkward. But, in practical terms, things have worked well: ISNAR has given us abundant indications of where it is headed. We have had extensive interchanges with management and staff that have told us as much as we need to know about their headings without encroaching at all on our autonomy as reviewers. Yet we have emerged with an assessment that is more approving than not of the strategy to which the Institute appears to be moving.
We want to record our appreciation to the Board, Director General and staff of ISNAR for their cooperation and tireless efforts to make all phases of the Panel's work easier.

I especially appreciate the dedication of the Panel members and TAC and CGIAR Secretariat support staff. They have worked as a team in which each member pulled his or her weight and in which consensus was reached through rigorous but amicable debate.

Yours sincerely,

John P. Lewis
(Panel Chairman)
THE CONSULTATIVE GROUP ON INTERNATIONAL AGRICULTURAL RESEARCH
TECHNICAL ADVISORY COMMITTEE AND CGIAR SECRETARIAT

REPORT OF THE
SECOND EXTERNAL PROGRAM AND MANAGEMENT REVIEW
OF THE
INTERNATIONAL SERVICE FOR NATIONAL AGRICULTURAL RESEARCH
(ISNAR)

Review Panel:

Prof. J.P. Lewis (Chairman)
Dr. E.R. Moscardi
Dr. B.V. Ouayogode
Mr. C.S. Sastry
Prof. B.E. Swanson
Dr. T.L.V. Ulbricht

Dr. E.T. Craswell (TAC Secretariat)
Ms. E.M. Field (CGIAR Secretariat)
Ms. P. San Jose (Resource Person, Financial Management)

TAC SECRETARIAT
FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
JULY 1991
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUMMARY AND RECOMMENDATIONS</td>
<td>xxxiii</td>
</tr>
<tr>
<td>CHAPTER 1 - INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>1.1. National Agricultural Research Systems</td>
<td>1</td>
</tr>
<tr>
<td>1.2. ISNAR’s Origin and Evolution</td>
<td>2</td>
</tr>
<tr>
<td>1.3. ISNAR’s Response to the First External Program and Management Reviews</td>
<td>2</td>
</tr>
<tr>
<td>1.3.1. Response to the Program Review</td>
<td>2</td>
</tr>
<tr>
<td>1.3.2. Response to the First External Management Review</td>
<td>3</td>
</tr>
<tr>
<td>1.4. Terms of Reference of the Second External Review</td>
<td>9</td>
</tr>
<tr>
<td>1.5. Conduct of the Review and Report Structure</td>
<td>9</td>
</tr>
<tr>
<td>CHAPTER 2 - PERSPECTIVE</td>
<td>11</td>
</tr>
<tr>
<td>2.1. Scale and Multipliers</td>
<td>11</td>
</tr>
<tr>
<td>2.1.1. Research-Based Service</td>
<td>11</td>
</tr>
<tr>
<td>2.1.2. Limited Implementation</td>
<td>11</td>
</tr>
<tr>
<td>2.1.3. Staggered Intermittent Interventions</td>
<td>12</td>
</tr>
<tr>
<td>2.1.4. Lead-Country-Led Diffusion</td>
<td>12</td>
</tr>
<tr>
<td>2.1.5. Collaborative Research and Training</td>
<td>12</td>
</tr>
<tr>
<td>2.1.6. Collaboration with Regional (Especially Ecoregional) Centers in the New CGIAR</td>
<td>13</td>
</tr>
<tr>
<td>2.2. The Evolving CGIAR Frame</td>
<td>13</td>
</tr>
<tr>
<td>2.2.1. Long-Term Time Horizons</td>
<td>13</td>
</tr>
<tr>
<td>2.2.2. But in the Medium Term</td>
<td>13</td>
</tr>
<tr>
<td>2.2.3. Accent on Institution Building</td>
<td>13</td>
</tr>
<tr>
<td>2.2.4. An ISNAR-IIFPRI Merger?</td>
<td>13</td>
</tr>
<tr>
<td>2.2.5. The Regional and Ecoregional Factor</td>
<td>14</td>
</tr>
<tr>
<td>2.2.6. The Need for Experimentation, Flexibility, and Opportunism</td>
<td>14</td>
</tr>
<tr>
<td>2.3. Does ISNAR Deserve Pivotal Casting within the New CGIAR?</td>
<td>14</td>
</tr>
<tr>
<td>2.3.1. Impact</td>
<td>14</td>
</tr>
<tr>
<td>2.3.2. Flaws and Shortfalls</td>
<td>16</td>
</tr>
<tr>
<td>2.3.3. But Learning Curves, Gestation Periods, and the On-Balance Assessment</td>
<td>16</td>
</tr>
<tr>
<td>2.4. The Claim for Medium-Term Additionality</td>
<td>16</td>
</tr>
<tr>
<td>2.5. Should the Institute Relocate?</td>
<td>16</td>
</tr>
</tbody>
</table>
CHAPTER 3 - LEGAL STATUS, MANDATE AND GOVERNANCE 18

3.1. Legal Status of ISNAR ........................................ 18
  3.1.1. International Status ...................................... 18
  3.1.2. Employment of Spouses .................................. 18
  3.1.3. Applicability of Dutch Labor Laws ....................... 18

3.2. ISNAR’s Mandate ............................................... 18

3.3. The Board of Trustees and Its Performance ..................... 19
  3.3.1. Membership ............................................... 19
  3.3.2. The Board’s Role ......................................... 20
  3.3.3. Management of Board Business ............................ 22
  3.3.4. Assessment .............................................. 23

CHAPTER 4 - STRATEGY AND PRIORITIES 24

4.1. ISNAR’s Strategy: Highlights .................................. 24

4.2. ISNAR’s Planning Process ....................................... 24

4.3. Assessing ISNAR’s Strategy .................................... 26
  4.3.1. Strategy Implementation .................................. 26
  4.3.2. Performance and Impact .................................. 27
  4.3.3. Analysis and Recommendations ............................ 31

CHAPTER 5 - THE STRUCTURE OF ISNAR AND ITS MANAGEMENT 35

5.1. Introduction .................................................. 35

5.2. Leadership: Board and Senior Management ...................... 35

5.3. The Present Structure of ISNAR ................................ 35
  5.3.1. Staffing and Organizational Culture ....................... 38
  5.3.2. Present Management Committees ............................ 38

5.4. Suggestions for Improving ISNAR’s Organizational Structure 40
  5.4.1. Possible Models .......................................... 40
  5.4.2. Management Committees and Their Function ................ 45

5.5. The Planning, Budgeting, and Review Process ................... 46
CHAPTER 6 - ADVISORY SERVICES ............................................. 47

6.1. ISNAR Approach .......................................................... 47
   6.1.1. Overview ......................................................... 47
   6.1.2. Components of the Advisory Service Program ............... 47
      6.1.2.1. The Diagnostic Phase ............................ 47
      6.1.2.2. The Planning Phase ............................ 47
      6.1.2.3. The Implementation Phase ....................... 48

6.2. Achievements and Impact ............................................ 48

6.3. Constraints to Achievements and Impact ............................ 50
   6.3.1. Domestic Environment and Internal Problems of NARS .... 50
   6.3.2. External Influences on NARS .............................. 50
   6.3.3. External and Internal Problems of ISNAR and Their
          Consequences ........................................ 51

6.4. Assessment and Recommendations .................................. 51
   6.4.1. Assessment of Advisory Service Program ................. 51

CHAPTER 7 - RESEARCH ...................................................... 53

7.1. Introduction: The Development of ISNAR’s Research ............ 53

7.2. ISNAR’s Comparative Advantage in Research .................... 54

7.3. Organizing the Research Effort .................................... 54

7.4. Sequencing and Allocating the Research Effort ................... 55

7.5. Research: Tentative Assessment .................................... 56
   7.5.1. Downstream Connections .................................. 57
   7.5.2. External Relations, Partnerships, Networking .......... 57
   7.5.3. Selected Major Research Projects ....................... 57
   7.5.4. Literature and Quality Control ......................... 59
   7.5.5. Research Content ........................................ 60
   7.5.6. The Expertise Profile ..................................... 60

CHAPTER 8 - TRAINING PROGRAM ............................................. 62

8.1. Introduction .......................................................... 62

8.2. Training Activities 1986-90: Major Trends ........................ 62

8.3. Assessment of ISNAR Training Activities ......................... 64
CHAPTER 9 - INFORMATION

9.1. Introduction ........................................ 70

9.2. Publications ........................................ 70
  9.2.1. Introduction ................................... 70
  9.2.2. Issues .......................................... 71
  9.2.2.1. The Multiplicity of ISNAR Publications ......... 71
  9.2.2.2. Quality ...................................... 72
  9.2.2.3. Evaluation of ISNAR's Publications ............... 72
  9.2.2.4. Language .................................... 73
  9.2.2.5. The Publications Committee ..................... 73
  9.2.2.6. Publications Unit and Staff ....................... 74
  9.2.2.7. Sale of Publications and Use of Commercial Publishers .... 75
  9.2.2.8. Journal of Agricultural Research Management ....... 75

9.3. Computing Services .................................. 75

9.4. Library and Documentation Center ..................... 77

9.5. Future Activities in the Information Area at ISNAR .......... 77

CHAPTER 10 - THE MANAGEMENT OF HUMAN RESOURCES ....... 78

10.1. Overview .......................................... 78

10.2. The Classification and Composition of Staff ............. 78

10.3. Personnel Policies and Procedures .................... 80
  10.3.1. The New Staff Regulations ..................... 80
CHAPTER 11 - FINANCE AND ADMINISTRATION

11.1. Introduction ........................................ 84
11.2. Fund Management .................................. 84
   11.2.1. Trends in Funding .............................. 84
   11.2.2. Use of Funds .................................. 85
   11.2.3. Asset Management ............................... 86
11.3. Financial Planning, Control, and Reporting ................. 87
   11.3.1. Planning and Budgeting .......................... 87
   11.3.2. Financial Management Information System .......... 87
   11.3.3. Financial Accountability ........................ 88
11.4. Administration ....................................... 88

CHAPTER 12 - EXTERNAL RELATIONSHIPS

12.1. Introduction ......................................... 90
12.2. ISNAR's Relationship with NARS ...................... 90
12.3. ISNAR's Relationships with Regional Organizations and Networks 91
12.4. ISNAR Collaboration and Relations with Other IARCs ........ 92
12.5. Relations with FAO .................................. 93
12.6. ISNAR's Relationships with Donors ................... 94
12.7. Host-Government Relations ........................... 94

CHAPTER 13 - OVERALL ASSESSMENT -- AND THE FUTURE .......... 96

13.1. Introduction ......................................... 96
13.2. Investing in ISNAR .................................................. 96

13.3. The Substantive Span of Attention: Some Broadening ................. 97
  13.3.1. Sustainable Development -- An Intensified Natural Resource Focus .... 97
  13.3.2. Biotechnology ................................................. 97
  13.3.3. Forestry and Fisheries ....................................... 97
  13.3.4. Irrigation Management ....................................... 98

13.4. An Agenda for Future Improvements .................................. 98
  13.4.1. Upstream-Downstream Linkage ................................ 98
  13.4.2. Recruitment and Personnel-Management Priorities ............... 98
  13.4.3. Maintaining a Balanced, Manageable Program ................. 99
  13.4.4. External Relations ........................................... 100
  13.4.5. Attention to Equity .......................................... 100

13.5. A Final Word .......................................................... 100

ACKNOWLEDGEMENTS ....................................................... 102

APPENDIX I. Panel Composition and Biographical Information

APPENDIX II. Terms of Reference for External Reviews

APPENDIX III. List of Institutions Visited and Individuals Met by the Review Panel

APPENDIX IV. Feedback from NARS Leaders Regarding an Assessment of ISNAR Services Received and Perceptions About Future Priorities and Services Required

APPENDIX V. List of Papers Prepared by ISNAR for the Review

APPENDIX VI. Acronyms
SUMMARY AND RECOMMENDATIONS

SUMMARY

ISNAR -- Origins and Evolution

ISNAR had its origins in the late 1970s through a series of meetings concerning the need for national agricultural research systems (NARS) in developing countries to be strengthened, so that the pace of technological innovation and adaptation of post-green revolution agriculture could be accelerated. ISNAR began its activities in 1980, concentrating on undertaking diagnostic reviews of NARS and building an institutional and knowledge base in the field of agricultural research management in developing countries. In 1985 the external program and management reviews recognized ISNAR’s achievements by recommending that the institute be accepted as a fully fledged center in the Consultative Group on International Agricultural Research (CGIAR). The reviews made a number of other recommendations, among the most significant of which was that ISNAR should recognize research as an important major program. In its first ten years ISNAR has evolved into an established institution with a staff complement of 92.

Perspective

Agricultural research investment in developing countries has grown threefold during the past two decades. Bilateral and multilateral donors have supported this growth but the rapid expansion in the numbers of scientists has not been matched by growth in operating funds. At the same time, the need to increase the productivity of agriculture in many countries is growing more urgent. NARS need to improve the efficiency of their research which, in most cases, will require improvements in research management.

ISNAR is dedicated to strengthening developing countries’ capacities for agricultural research at the national level. However, ISNAR’s size is enormously outclassed by the size of its market. In the context of the CGIAR, ISNAR is a small center but recent thinking in the CGIAR has emphasized the importance of building the capacities of NARS for conducting and managing their own research. A major task of this review was to assess whether ISNAR was up to playing a pivotal, system-building role within the evolving CGIAR system.

Impact

The goal of ISNAR is to assist in improving the effectiveness and efficiency of NARS through enhanced capacity in the areas of agricultural research policy, organization, and management. ISNAR’s systems approach for pursuing this goal delineates 12 critical factors as components of the system. These are not only points of intervention but also themes around which research, training, and advisory services are focused. Embracing the recommendations of the previous external review, ISNAR has developed and implemented the concept of a research-based service.

Assessing the impact of new and improved institutional technologies and processes in these areas is notoriously difficult. Nevertheless the Review Panel has been able to consider
a number of different assessments of ISNAR's programs: analyses by ISNAR's own country officers; ISNAR's and the Panel's surveys of NARS and donors; Panel visits to eight collaborating countries; and exposure to ISNAR research and training seminars and to extensive samples of ISNAR's large published output.

The burden of all of this evidence and testimony is overwhelmingly positive, although there have been weak points. While it is early for judging the results of, as opposed to the inputs to, ISNAR's efforts, there are numerous clear cases where ISNAR's interventions have played major roles in strengthening NARS through better management breakthroughs in the structuring and/or conduct of agricultural research. Ghana, Kenya, Uruguay, and Costa Rica all are such cases, and there are others.

Programs

ISNAR’s three functional activities are advisory service, research, and training.

The advisory service is the primary contact point between ISNAR and the NARS. Generally the service is carried out in three major stages: a diagnostic review, a planning stage to tackle the problems identified in the review, and an implementation stage. In the last five years ISNAR has conducted 19 diagnostic reviews and helped 16 countries develop strategic national agricultural research plans. In the process ISNAR has developed a vast store of knowledge about the strengths and weaknesses of NARS, while at the same time providing independent and effective advice that is put to good use not only by NARS but also the donor agencies which support them. As part of the advisory service, new tools such as program budgeting and management information systems have been introduced in several countries.

The research program is designed to develop solutions to problems, analytical procedures, and management tools for NARS. Major projects are concerned with agricultural indicators (data base on NARS), on-farm client-oriented research, research-technology transfer linkages, priority setting, biotechnology, and small countries. These projects have generated good-quality reports but, the product is uneven.

The training program has grown over the past five years in response to the previous external review and has moved from providing general management training to NARS leaders to more specific courses for senior- and middle-level managers. Furthermore, training activities are being held more frequently in regions and at the national level. The experience ISNAR has gained in training is in need of comprehensive review in order to improve the overall quality.

Information

Information management at ISNAR can be generally categorized as input (the function of the Library and documentation center), throughput or information processing (computer services), and output. The output in the form of publications has been prodigious, but more attention to quality control and a review of procedures is obviously needed.
Computing services and the Library are providing effective services in-house, but the organization of work in these areas should also be reviewed.

**Organization and Management**

ISNAR is ably led, with an appropriate balance between Board and Management. However, authority is too highly centralized in the Office of the Director General. The organizational structure is flat, there are no adequate mechanisms to coordinate work processes, and staff have divided too much into two sets of culturally conflicted soloists. Given ISNAR's current size, mission, and strategy, its organization and structure are no longer suitable.

**Financial and Human Resource Management**

The momentum of a growth phase has ended and ISNAR now faces financial constraints. The Administration is tightening up but -- despite successful efforts to run an efficient show -- more severe means may be needed in future to meet ISNAR's high fixed costs (which currently exceed core revenue), unless funding increases.

ISNAR has a small, highly diverse and committed staff. Its professionals have extensive experience in developing countries, but there are few with formal management training and developed-country research management experience. While there has been much concern for financial resources in recent years, the planning, management, and development of human resources have not been given adequate attention. Morale suffers.

**Overview**

ISNAR is now a going concern doing a very important job. During its recent years of growth, the institute has experimented and made mistakes but has learned from them. ISNAR is now in a strong position to capitalize on its experience while making the most of changes in the CGIAR mandate and system. This will require new and realistic strategic and operational plans and a reorganization of the institute. We believe that ISNAR is up to these challenges and deserves a substantial increase in support.
RECOMMENDATIONS

The Panel has made 19 recommendations. These are listed in the order of the Report.

CHAPTER 1 - INTRODUCTION

No recommendations.

CHAPTER 2 - PERSPECTIVE

No recommendations.

CHAPTER 3 - LEGAL STATUS, MANDATE AND GOVERNANCE

3.1. The Board should always have in mind that several members of the Board at any time should have experience and expertise in agricultural research management.

3.2. The Board should give serious consideration to reducing the size of its Program Committee.

CHAPTER 4 - STRATEGIES AND PRIORITIES

4.1. ISNAR should take appropriate steps to involve the NARS early on in the process of strategic planning.

4.2. ISNAR should develop a more effective scheme for setting priorities among countries and regions according to the stage of development and needs and opportunities of the different NARS.

CHAPTER 5 - ORGANIZATION AND MANAGEMENT

5.1. There should be one Deputy Director General (as the structure is being significantly changed, this should be recognized as a new position, internationally advertised).

5.2. Three or four Program Directors should be introduced with line responsibilities for staff and budgetary authority.

CHAPTER 6 - ADVISORY SERVICES

6.1. ISNAR should promote an institutional approach, as distinct from an individual approach, to the measures required to strengthen the NARS that seek its advisory services; in this regard, more attention should be given to synthesizing ISNAR's country experiences.
6.2. ISNAR should more systematically address the important role of universities and schools of agriculture in developing-country NARS.

CHAPTER 7 - RESEARCH

7.1. ISNAR could appropriately direct some of its research effort to the study of the experiences of agricultural research management in other countries than those in which it has worked -- both selected developed countries and some of the larger and/or more technically sophisticated developing countries.

7.2. In determining its research priorities, ISNAR should give more weight to the research needed by the advisory service to provide appropriate management tools for NARS.

CHAPTER 8 - TRAINING PROGRAM

8.1. The Training Unit should be given the responsibility and authority to ensure that basic procedures for training are followed for all ISNAR training events, and that procedures for monitoring and evaluation of training events are established.

8.2. ISNAR should actively pursue a training strategy that emphasizes a multiplier effect by developing training packages that can be used by intermediary institutions, or used in a region through a network of competent trainers who can begin to provide much of the direct training services to middle-level managers in NARS.

CHAPTER 9 - INFORMATION

9.1. ISNAR should review and rationalize its Publications Policy, so that its publications are appropriate for ISNAR's goals, especially the goal of serving the needs of its primary clients: NARS leaders and managers.

9.2. A new Publications Committee should be established with the authority to control quality and enforce ISNAR's Publications Policies and Procedures.

9.3. The Head of the Publications Unit should be given managerial authority over its operations, including its own budget.

CHAPTER 10 - MANAGEMENT OF HUMAN RESOURCES

10.1. ISNAR should establish guidelines for staff assessment/rewards that reflect the changes to be introduced in the organizational structure and reinforce institutional goals.

10.2. The Director General should play a greater role in the guidance and oversight of human resource planning, management, and development at ISNAR.
CHAPTER 11 - FINANCE AND ADMINISTRATION

No recommendations.

CHAPTER 12 - EXTERNAL RELATIONSHIPS

No recommendations.

CHAPTER 13 - OVERALL ASSESSMENT

13.1. CGIAR, recognizing the central role of ISNAR in institution building, should increase its actual core funding by not less than $2 million in 1993 with some continuing growth thereafter.
1.1. National Agricultural Research Systems

Agricultural research has been described as the engine of growth for developing-country economies, and documentary evidence to support this assertion is well established in the development literature. The successes of the green revolution, particularly in Asia, encouraged many developing countries to invest in building strong national agricultural research systems (NARS) to develop and adapt improved agricultural production technologies in concert with the international agricultural research sponsored by the CGIAR. Consequently, research investment in developing countries grew more than threefold during the past two decades. The scale of this expansion is indicated by the estimate that, averaged over the 1981-85 period, the total number of researchers in NARS was 78,000, compared with 20,000 in 1961-65.

The efforts of developing countries to build effective NARS has been quite strongly supported by bilateral and multilateral donor agencies. The World Bank alone invested $2.1 billion in agricultural research in various developing-country projects during 1981-1987. Strengthening NARS is a major goal of the CGIAR system; in 1989 it allocated $44 million (19% of the CGIAR budget) to information, institution building, and training activities. These statistics illustrate the critical importance ascribed to the strengthening of NARS by key members of the development community.

Although the number of researchers employed in NARS has increased dramatically over the past two decades, financial resources have not increased in parallel. Shortages of operating funds are severely hampering research output, and salaries and conditions of service for scientists in many countries are not attractive. Many NARS are donor driven, due to inadequate support from their national governments, and find it difficult to set and pursue their own priorities.

Most NARS today face new and serious research challenges. These include the need for new technologies that improve production to meet the increased demand for food by ever-burgeoning populations and associated problems of urbanization and increased numbers of poor, high national priority for agricultural exports, increased concern for conservation of the natural resource base for agriculture, and government pressure to come up with results as a justification for continued funding.

To help them tackle the technical aspects of these problems, NARS can turn to modern tools such as biotechnology and computing/information science. Clearly, many NARS also need help in the management of the changing complexities of modern agricultural research and in accessing some of the modern tools for management.
1.2. ISNAR’s Origin and Evolution

ISNAR finds its origins in a meeting convened in 1977 by the German government and the Rockefeller Foundation to discuss the possibility of establishing an international service to assist in strengthening developing-country NARS. A proposal from the meeting was discussed at TAC 17 in the same year. Subsequently, a Task Force was created to consider the need for such a service in the CGIAR, and their report was considered by TAC and the CGIAR in 1978. Although FAO expressed strong reservations about the need for a new agency, the CGIAR agreed that the new service be created as an international legal entity to strengthen NARS, primarily by assisting them in the areas of research planning, organization, and management. The German technical cooperation agency (GTZ) undertook the role of implementing agency, and ISNAR was established in October 1979 and started its activities in 1980.

ISNAR’s Constitution (as amended 11/12 May 1981) specified that the purpose of ISNAR is to help strengthen agricultural research capabilities in developing countries. The ultimate goal of ISNAR’s assistance is to enable developing countries to plan, organize, manage, and execute research more effectively from their own human, material, and financial resources. Additionally, the Constitution stated that ISNAR should serve as a linkage between the international agricultural research centers (IARCs) of the CGIAR system and NARS, and as an intermediary to promote bilateral cooperation in the field of agricultural research.

The Constitution specified that ISNAR be reviewed by the CGIAR after an initial period of five to six years in order to assess its performance, mandate, permanent location, and constitution. Consequently, external program and management reviews were organized by TAC and the CGIAR Secretariat in 1985. The recommendations from these reviews, and ISNAR’s subsequent response to them, are presented in Tables 1.1. and 1.2. and discussed in Section 1.3. below.

ISNAR has evolved over the past ten years from a fledgling agency to an established institution with 50 senior and associate professional staff and 42 support staff. Since the last external review, ISNAR has doubled in size, has developed a strategic plan, has greatly strengthened its research capacity, and has been led by two new Directors General.

1.3. ISNAR’s Response to the First External Program and Management Reviews

1.3.1. Response to the Program Review

The 1985 External Program Review (EPR) made a total of 34 recommendations, seven of them major (see Table 1.1.). Perhaps the most significant recommendation was that ISNAR continue to be supported by the CGIAR and become a fully fledged member of the system. This and 20 of the other recommendations were fully implemented by ISNAR.
Following the EPR recommendations, ISNAR has developed a strategic plan which sets out and analyzes various priority considerations and provides a framework for the program and organizational structure. It also confines ISNAR’s activities to research systems and their interface with extension, and rejects the notion of a broker's role for ISNAR between donors and NARS. On a related issue, ISNAR had decided not to pursue a coordinating role between the IARCs and NARS, and this decision was supported by the EPR. However, although the EPR recommended that ISNAR should keep informed about the IARC's research so that it can be in a better position to serve NARS, ISNAR's system for assigning staff responsibilities in this regard has largely lapsed in recent years.

ISNAR has taken major steps to implement the EPR recommendations concerning the strengthening of research and training. The EPR saw a need for a fellowship program to train up to six mid-level NARS professionals at ISNAR, but this was not implemented because the necessary special funding was not forthcoming.

Table 1.1. indicates why some recommendations were partially implemented or not implemented at all. The publications section of ISNAR has not assumed a role of assisting NARS, as recommended in the last EPR; this issue is discussed further (in Chapter 9) of this report.

1.3.2. Response to the First External Management Review

Table 1.2. lists the recommendations of the 1985 External Management Review (EMR) of ISNAR and indicates how the Center has responded to these: fully, partially, or not at all. It also includes brief comments regarding the Center's response.

As Table 1.2. shows, there were 29 recommendations from the 1985 EMR and ISNAR has implemented all of these fully or partially. "Partial implementation" includes those cases in which the ISNAR Management or Board decided against implementing a recommendation in its entirety, or where it has initiated implementation but this is not yet complete.

Of the many changes that were recommended in 1985 and have been fully or partially implemented at ISNAR, the most significant include:

- development of a comprehensive strategy and medium-term plan (recommendation 1);
- organizational restructuring (recommendations 28, 29);
- reduction of Board size and revision of Board rules and procedures (recommendations 3-10);
Table 1.1. ISNAR's Response to the 1985 External Program Review

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Implementation</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Full</td>
<td>Partial</td>
</tr>
<tr>
<td>1. ISNAR continue to be supported by the CGIAR and be recognized as a full-fledged member of the system.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>2. ISNAR Board, Management, and staff develop a clearly articulated strategy for ISNAR's future activities.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>2.1. Apply a clear set of criteria for setting country and regional priorities.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>2.2. Confine activities to research systems and their interface with extension systems.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>2.3. Do not play the role of a broker between donors and national programs.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>2.4. Do not become involved in projects beyond the project preparation stage.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>2.5. Special projects undertaken only if they form an integral part of the overall Strategy and program.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>2.6. Once a strategy is articulated, inform donors, both present and potential, about strategy, program, and impact.</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>


Criteria are relevance to mandate, equity, potential impact, and efficiency of resource allocation. However, high CGIAR priority to sub-Saharan Africa, donor priorities, and potential for continuity are also strong influences on priority setting.

ISNAR does, however, support NARS efforts to locate donor funds.

ISNAR has become involved in implementation by way of counsel, advice, and monitoring through outposted staff in collaborative special projects in six countries.

Special projects are used to strengthen research on specific critical factors or themes in the framework of the Strategy.

The Director General is responsible for donor contacts and reports to the Board of Trustees.
<table>
<thead>
<tr>
<th>3.</th>
<th>ISNAR strive to become a &quot;center of excellence&quot; in agricultural research management.</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1.</td>
<td>Augment in-house capacity to assist NARS in using economic analysis to determine research priorities, assess economic consequences of strategies, and plan and program research.</td>
</tr>
<tr>
<td>3.2.</td>
<td>Alter Chapter III.7 of Constitution to make ISNAR's services available to any developing country; provide assistance to a country only on request.</td>
</tr>
<tr>
<td>3.3.</td>
<td>More explicitly inform self of activities of other IARCs; be in a better position to service NARS.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3.</th>
<th>Is ISNAR has striven to become a recognized authority.</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.</td>
<td>ISNAR capacity in these areas has been markedly increased.</td>
</tr>
<tr>
<td>3.</td>
<td>Although some ISNAR staff were for a time assigned to serve as liaison persons with particular IARCs, these assignments have lapsed.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4.</th>
<th>A position of Program Director be created at the deputy director level to manage the three functional activities.</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1.</td>
<td>Facilitate a comprehensive, integrated approach to planning, priority setting, and resource allocation.</td>
</tr>
<tr>
<td>4.2.</td>
<td>Develop PMIS and make it operational.</td>
</tr>
<tr>
<td>4.3.</td>
<td>Review publications activities and institute a publications policy.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4.</th>
<th>Two Deputy Directors General were appointed – one for Research and Training and one for Collaboration with NARS.</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.</td>
<td>Some effort at integration but improvements needed.</td>
</tr>
<tr>
<td>4.</td>
<td>Publications policy instituted but needs review and updating. Very weak area.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>5.</th>
<th>The follow-up and review and systems analysis activities of ISNAR continue to remain the central functional activity.</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.1.</td>
<td>Adopt a policy of funding initial NARS reviews from core budget.</td>
</tr>
<tr>
<td>5.2.</td>
<td>Make NARS review prerequisite for other ISNAR follow-up activities.</td>
</tr>
<tr>
<td>5.3.</td>
<td>Refine methodology for reviewing NARS by thorough assessment of prior reviews.</td>
</tr>
<tr>
<td>5.4.</td>
<td>Pay increased attention to the likely level of resource support from domestic and external sources for NARS reviews.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>5.</th>
<th>In 1986-81, out of 25 system reviews, 13 were funded entirely from core; of the others, six were more than 50%, and six less than 50% funded from core.</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.</td>
<td>In 1986-81, ISNAR was involved in four countries in which the NARS had not been reviewed, and in one country where the review followed other ISNAR involvement.</td>
</tr>
<tr>
<td>5.</td>
<td>Guidelines for system and institute reviews were published in 1989 and further refinement of the methodology is planned.</td>
</tr>
<tr>
<td>5.</td>
<td>ISNAR has stressed the importance of resource constraints.</td>
</tr>
<tr>
<td>5.5.</td>
<td>Devise mechanisms to service the requirements of the large numbers of small countries with weak NARS.</td>
</tr>
<tr>
<td>5.6.</td>
<td>Curtail direct involvement with regional organizations and networks.</td>
</tr>
<tr>
<td>5.7.</td>
<td>Publications section assist NARS in identifying sources of expertise and support for enhancement of the NARS communications activities.</td>
</tr>
</tbody>
</table>

6. Training activities be increased.
6.1. Aim new fellowship program at annually training up to six mid-level NARS professionals. | X | Now 15% of staff time. |
6.2. Hold workshops for senior NARS managers on planning, priority setting, review, and evaluation of agricultural research. | X | Special funding was sought but not obtained. |
6.3. Increase emphasis on training courses in both the general and specific aspects of agricultural research management. | X | |
6.4. IFARD to take greater responsibility for conferences. | X | |
6.5. Assist IFARD in obtaining independent resource support. | X | |

7. Research be recognized as equally legitimate and important as ISNAR's other major programs.
7.1. Carefully focused research on priority assessment and organization and management of research; establish reputation as a "center of excellence." | X | Now 26% of staff time. |
7.2. Review the resource needs of the data base project and explore IFPRI collaboration. | X | Special funding obtained for data base project. |
7.3. Professional staff to meet accepted professional standards, including some level of publication in refereed journals. | X | |
### Table 1.2. ISNAR’s Response to the 1985 External Management Review

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Recommendation</th>
<th>Implementation</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2. Adopt a clear mechanism for planning, priority setting, and resource allocation.</td>
<td>X</td>
<td>Through Strategic Plan, MTP, annual P&amp;B, &amp; PMIS [see recommendation 11 below].</td>
</tr>
<tr>
<td>[3] The Board of Trustees</td>
<td>3. The Board should play a stronger role in planning.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4. Reduce Board membership from 15 to 11 and comprise/select members as follows:</td>
<td>X</td>
<td>Membership reduced to 12 in 1986.</td>
</tr>
<tr>
<td></td>
<td>- one member appointed by the host country;</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- three members nominated by the CGIAR and elected by the Board;</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- six members-at-large elected by the Board;</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- the Director General of ISNAR as an ex-officio member.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5. Delete the last paragraph of Section V1.22 of the Constitution; establish a mutually agreeable plan for regular meetings to exchange information between ISNAR and the FAO; Invite the FAO to attend ISNAR's Board meetings as an observer.</td>
<td>X</td>
<td>Delete clause re attendance Chair of Center Directors in 1986; retained clause re FAO attendance.</td>
</tr>
<tr>
<td></td>
<td>6. The Board should consider changing the existing procedures for staggered terms in order to maintain a strong and experienced Board over the next five years.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td></td>
<td>7. In place of the annual election of its Chairman, the Board should elect the Chairman for a longer term which would not exceed three years, and this appointment should not be renewable.</td>
<td>X</td>
<td>Elected annually for term of up to four years, as of 1989.</td>
</tr>
<tr>
<td></td>
<td>8. The Board should appoint an ISNAR staff member, in consultation with the Director General, as Secretary to the Board, with specific terms of reference, including the period of appointment.</td>
<td>X</td>
<td>Completed in 1988.</td>
</tr>
<tr>
<td></td>
<td>9. The Chairman of the Program Committee should be appointed as an ex-officio member of the Executive Committee.</td>
<td>X</td>
<td>Completed in 1988.</td>
</tr>
<tr>
<td></td>
<td>10. The Chairman of the Program Committee and of the Nominating Committee should be elected by the Board rather than by their respective membership.</td>
<td>X</td>
<td>Completed in 1988/89.</td>
</tr>
<tr>
<td>[4] Organization Structure &amp; Project Management</td>
<td>11. Consider every country review and every piece of research, however funded, as a distinct project, with a project leader responsible for planning, budgeting, implementation, and monitoring.</td>
<td>X</td>
<td>Project Mgt Information System (PMIS) Implemented in 1986; leaders still lack financial control.</td>
</tr>
<tr>
<td></td>
<td>12. Two members of ISNAR staff who are not members of a particular mission should always be assigned to assist during the planning and, subsequently, the internal review stages of each NARS project, and one of them should have a regional background different from that of the country concerned.</td>
<td>X</td>
<td>Now no longer done.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>Have on staff specialists in the main fields in which ISNAR is working, some of which it currently lacks; every person recruited to the NARS program should have, or be expected to develop, special expertise in one of these fields.</td>
<td></td>
<td>Achieved in part through recruitment and/or developed on-the-job.</td>
</tr>
<tr>
<td>14.</td>
<td>Appoint more senior staff from developing countries to fellowship posts as funds permit, taking into account the EPR recommendation on special priority for Africa.</td>
<td></td>
<td>Fellowship program not initiated; fellows &amp; visiting scientists are appointed.</td>
</tr>
<tr>
<td>15.</td>
<td>Review and, if necessary, modify the present assessment system in order to ensure that it meets ISNAR's special needs.</td>
<td></td>
<td>Revised in 1986-87; reviewed again in 1969.</td>
</tr>
<tr>
<td>16.</td>
<td>Advertise all senior posts.</td>
<td></td>
<td>34 of 41 posts were advertised.</td>
</tr>
<tr>
<td>17.</td>
<td>For each senior vacancy the Director General should set up an appropriate selection panel that would select a short list of candidates and interview them.</td>
<td></td>
<td>All posts have not been advertised.</td>
</tr>
<tr>
<td>18.</td>
<td>Introduce one or two additional grades for professional staff.</td>
<td></td>
<td>Completed in 1967.</td>
</tr>
<tr>
<td>19.</td>
<td>Place all newly appointed personnel on fixed-term contracts for about three years, followed by a formal review.</td>
<td></td>
<td>Completed in 1987.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20.</td>
<td>Follow a policy of full recovery of indirect costs on special projects.</td>
<td></td>
<td>Costs are not fully recovered.</td>
</tr>
<tr>
<td>21.</td>
<td>Expand activities in donor relations.</td>
<td></td>
<td>Primarily by the Director General.</td>
</tr>
<tr>
<td>22.</td>
<td>Have staff take part in preparing the financial budget as well as in describing the programs to which it relates.</td>
<td></td>
<td>Limited staff participation.</td>
</tr>
<tr>
<td>23.</td>
<td>Modify the financial information system to provide timely information to assist section heads and project leaders in managing project budgets.</td>
<td></td>
<td>New software for the PMIS should aid further in this.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24.</td>
<td>Have the Advisory Committee on Publications formulate a more explicit publications plan.</td>
<td></td>
<td>Done in 1986; under review.</td>
</tr>
<tr>
<td>26.</td>
<td>Involve the Publications Officer in preparing and managing the budget for publications, and send regular statements of expenditure to him or her.</td>
<td></td>
<td>Done through PMIS [also see recommendations 11 &amp; 23].</td>
</tr>
<tr>
<td>27.</td>
<td>Involve the Librarian in the preparation of the Library budget.</td>
<td></td>
<td>Done through PMIS.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29.</td>
<td>The new Director-General, as chief executive officer, should initiate the organizational restructuring process by presenting to the Board his preferred organizational arrangement.</td>
<td></td>
<td>Completed in 1986.</td>
</tr>
</tbody>
</table>
establishment of a Project Management Information System (PMIS) to strengthen planning, priority setting, resource allocation and monitoring, and to devolve budgetary responsibility to project leaders (recommendations 2, 11, 22, 23).

A discussion of these points is covered in the relevant chapters of this report, 1-31 along with an examination of ISNAR's progress in implementing other recommendations of the 1985 Review.

1.4. Terms of Reference of the Second External Review

The External Review Panel (composition listed in Appendix I) was engaged independently to appraise ISNAR's activities based on Terms of Reference provided by TAC and the CGIAR Secretariat. It is noteworthy that this is one of the first panels charged to undertake a joint program and management review. The broad areas covered by the Terms of Reference (Appendix II) include assessing the recent evolution of ISNAR, its mandate, strategy, organization, management, and programs. The Panel was also asked to review ISNAR's methods for ensuring the quality and relevance of its activities, services, and outputs. In addition, we are expected to assess management effectiveness, including leadership, values, and culture. Further, the Panel was asked to review the content of ISNAR's collaboration with NARS, CGIAR institutions, and other relevant outside agencies. Another major topic for the Review was ISNAR's achievement and impact. Finally, we are asked to assess the adequacy of the resources available to ISNAR for its current and proposed activities.

1.5. Conduct of the Review and Report Structure

The External Review was commissioned in October 1989. TAC and the CGIAR Secretariat consulted with the Board and Management of ISNAR in selecting the Chairman and Members of the Panel. The details of the review program were also developed in consultation with ISNAR management. CGIAR members, cosponsors, and CGIAR centers were invited to contribute to the list of supplementary questions in the Terms of Reference of the Panel.

In March 1991, the whole Panel met in the Hague for briefing, to observe meetings of the ISNAR Board of Trustees, and to meet with Board Members, Management, and staff. Plans for the Review were also discussed.

The Panel visited eight developing countries in June 1991 (see list of institutions and individuals visited in Appendix III). The whole Panel visited Kenya but the other seven countries were visited by groups of two to three Panel Members and resource persons. The main targets for the visits were NAKS but the opportunity was also taken to discuss ISNAR's programs with other development and research agencies in the countries visited. In addition to participating in the country visits, the Chairman of the Panel visited Dr. E. Saouma, the Director General of FAO in Rome. He also met with Dr. Biegman, the Director General of the Development

A detailed questionnaire concerning ISNAR was devised by the Panel and mailed to a representative sample of NARS leaders from all over the developing world. The responses, which were analyzed statistically, are summarized in Appendix IV and have been utilized in our assessment. A CGIAR Secretariat survey of ISNAR Board Members was also conducted and the results incorporated in appropriate sections of the Report.

The structure of the Report is largely based on the Terms of Reference of the Review. Chapter 2 presents the Panel's analysis of the major issues of the Review in a broad perspective; ISNAR's legal status, mandate, and Board issues are discussed in Chapter 3; priorities and strategies (Chapter 4) are followed by organization and management (Chapter 5); Chapters 6-9 assess ISNAR's activities – advisory services, research, training, and information; then follows management of human resources (Chapter 10), finance and administration (Chapter 11), and external relationships (Chapter 12). Finally, Chapter 13 provides an overall assessment and a view of ISNAR's future.
CHAPTER 2 - PERSPECTIVE

2.1. Scale and Multipliers

ISNAR is dedicated to strengthening developing countries' capacities for agricultural research at the national level. Even with resource expansion, the size of ISNAR as an instrument is enormously outclassed by the size of its target -- its market. Thus, on the one hand, the Institute must avoid the fallacy of trying directly to serve the totality of its market simultaneously. There is, for example, plenty of room for ISNAR and that small section of FAO that is mandated to do similar work to work side by side in the developing world.

But, on the other hand, if the Institute is to pursue its mission in a serious, nontrivial way, it requires a set of multipliers to broaden as well as make more enduring its impacts on NARS. The following are multipliers it is using and/or should use:

2.1.1. Research-Based Service

Embracing the recommendation of the previous external review, for five years the Institute has been actively implementing the concept that its outreach should be grounded on a core of in-house research. The multiplier involved is suggested by the old proposition that extension is difficult if you don't have much to extend. ISNAR promotes improved management of agricultural research, but there are not many packages of appropriate research management knowledge at the ready on the global R&D cafeteria for unmodified transfer to developing countries. Research -- albeit less basic or pure than adaptive and applied research, and much of it conducted in collaboration with NARS and in conjunction with the provision of services -- is needed to convert the global technical inventory into useful inputs into NARS management. And the responsibility for doing the research or getting it done needs to be shouldered by the service-delivering agency. Such research increases the force and reach of what the Institute has to extend with service and training. Even though research subtracts from what would be available for services and training out of a given total ISNAR budget, it can multiply the impact of the total budget by increasing the diffusion potential of the services delivered.

2.1.2. Limited Implementation

In order to multiply the impact of its scarce resources, ISNAR has been enjoined and, very properly, continues to enjoin itself to keep most of its work upstream -- to get only selectively into implementation. This cannot be a watertight distinction: ISNAR needs to do some implementation to test hypotheses. Some of its off-the-shelf service deliveries of management tools and materials to countries with which ISNAR has completed its extensive phase come close to "implementation", and sometimes special donor funding can be used to take advantage of spare Institute capacities to do implementation-type work, but it is rarer than is often imagined not
thereby to divert the Institute's program or to overburden its management. But in general the anti-implementation policy is a good multiplier.

2.1.3. **Staggered Intermittent Interventions**

It cannot be part of ISNAR's regular scenario to remain a more or less permanent and (as to level of effort) steady member of a given country's development promotion scene. There are too many countries and ISNAR's resources are too limited; at the same time, there would be little value in spreading a uniformly thin film of attention over the whole set of potential clients. Instead, the proper strategy, which the Institute is essentially following, is to commit substantial interventions to comparatively few countries, to stay long enough to achieve something or admit failure (it appears from cases thus far that this pulse of heavier effort may need to have an average duration of ten years or so), and then to phase down to a much lower level of monitoring, training, and limited ad hoc services. (This lower-pulse phase may be considerably modified in the instances of collaboration with ecoregional centers discussed below.) ISNAR's history is still short enough so that there have not yet been clear cases of second-round intensifications. But these are perfectly possible. The world changes; regimes change. Substantial second-generation problems may arise that invite medium-heavy reinterventions. Or the changes might be so great as to invite nearly a replication of the Institute's whole diagnostic, strategizing, etc., sequence. Nevertheless, the point remains that, within any medium-term time frame, the scattering of a minority of intensive involvements across a majority of light country involvements must be one of ISNAR's key multiplier mechanisms.

2.1.4. **Lead-Country-Led Diffusion**

Quite clearly, one of the major multipliers of ISNAR's impact must be that activated by the examples of its successful clients. Among the obvious candidates at present are Kenya, Uruguay, and Costa Rica. The Institute needs to think rather hard about how to facilitate the diffusion of positive experience with organization structures and models, policies, and management tools from such leading-case countries to others, especially regional neighbors. Regional institutions, discussed below, may become valuable intermediaries in the process. The one caveat for ISNAR is to do its facilitating quietly and inconspicuously. Promote the networking, but don't claim credit for it. Let the imagery be that of technical cooperation among the developing countries.

2.1.5. **Collaborative Research and Training**

This is a mechanism that overlaps the one just above. ISNAR can enter into formal collaborations with NARS partners in either research projects or training ventures. Even when these involve no diffusion to third countries, such collaboration permits the achievement of effective results and training impacts with smaller inputs of ISNAR effort than "solo-ing" would entail. Further, of course, there is frequently the potential for spillovers to neighboring countries.
2.1.6. **Collaboration with Regional (Especially Ecoregional) Centers in the New CGIAR**

A new multiplier mechanism for ISNAR is now in the offing. There is an opportunity to move experimentally into a type of collaboration with regional international agricultural centers that can augment both ISNAR's outreach and research potentials, increase the positive impact on NARS in the process, and contribute to enhanced coherence in the CGIAR system. To identify the possibility, however, one must understand some of the changes now underway in the CGIAR system.

2.2. **The Evolving CGIAR Frame**

2.2.1. **Long-Term Time Horizons**

In the long term, presumably the business of the CGIAR, and of ISNAR within it, is to promote such effective self-reliance in NARS as to put itself out of business.

2.2.2. **But in the Medium Term...**

During the next 10-20 years, however, there is no sign that diminishing overall effort in the CGIAR system will be appropriate. Some components can taper their personnel and budgetary scales, but there will be enough new and repeat clients, enough second-generation problems, and enough needed institution building to keep the appropriate size of the System's effort at least at its present real level.

2.2.3. **Accent on Institution Building**

All recent CGIAR and TAC documentation and deliberations underscore the need in the next medium term for greater relative emphasis on building capacities of NARS for conducting, including managing, their own research. This means more of an accent on human resource development and institution building within commodity center budgets but also more reliance on those global centers specializing in human resources development and institution building -- namely IIMI (in some measure) and, in particular, ISNAR.

2.2.4. **An ISNAR-IFPRI Merger?**

This has sometimes been suggested. In principle, it would not be a bad mistake, i.e., there are not such deep incompatibilities between the missions of the two centers as to prevent their joining if the transaction costs were low. But the costs at this point would be quite high. The styles are different, and there would be little synergism: the substantive agendas are parallel but distinct. One works on food and agricultural policy, the other on agricultural research policy along with other aspects of research management. We think that a marriage would be somewhat inappropriate and is unlikely.
2.2.5. The Regional and Ecoregional Factor

This is the new development that offers great promise as an ISNAR multiplier. In its latest deliberations the CGIAR is moving toward a modified structure that will formalize a two-part system -- still a set of global centers specializing in single or few commodities but also now a set of regional centers, mostly serving ecoregions, covering a range of commodities, in part doing their own, particularly adaptive, research, but constantly interfacing with the NARS of their regions and relaying to them the products of the global centers. There can be a natural synergism between ISNAR and these regional centers. Particularly with a few ISNAR professionals outposted to such centers, regional colleagues can add the critical mass to make field research effective, there can be collaboration in service interchanges with more NARS than ISNAR could reach effectively by itself, and the regional centers can distribute and use training methods and materials wholesaled by ISNAR.

There is a further aspect to the ecoregional initiative. It bespeaks a new CGIAR emphasis on natural resource management and conservation. Collaborating with ecoregional centers will help ISNAR (as it should) link into sustainable development issues.

2.2.6. The Need for Experimentation, Flexibility, and Opportunism

In evolving its operating strategy over the medium term, it would be a great mistake for an organization as small as ISNAR with so large a task to seek perfect symmetry in its program. As resources allow and promising opportunities present themselves, the Institute should enter into regional partnerships selectively, not across the board, and see what lessons can be learned. In this connection we note that working alliances with competent and interested regional centers outside the CGIAR system, e.g., IICA in San José and SACCAR in Gabarone, are not necessarily to be avoided. But fuller networking may be more feasible within the CGIAR club.

2.3. Does ISNAR Deserve Pivotal Casting within the New CGIAR?

At the beginning ISNAR was given a trial life of only five years. Five years ago it was anointed into a greater degree of permanence. But it is still small and flawed. Is it up to playing a pivotal, somewhat enlarged, institution-building role within the evolving CGIAR system? The positive case is not open and shut, but it is strong.

2.3.1. Impact

Compared to the effects of new crop varieties, the impacts of new or improved "soft" technologies and processes having to do with policy-making, priority setting, organizational structure, and middle-level management tools are notoriously difficult to assess. The effectiveness of such inputs is particularly sensitive to the cultural, political, and socioeconomic climates of particular countries at particular times. As a result, not only the net impacts of innovations but the times they take to materialize
can vary greatly. Nevertheless, in the course of, and in preparation for, this review, a considerable effort of the following sort has been made to assess ISNAR's impact on NARS:

- Extensive self-analyses have been prepared by ISNAR staff -- country officers, as well as other staff who have carefully and extensively documented achievement and performance across a set of such functional headings as research, diagnostics, planning, priority setting, and training. While it can be argued that such assessments could be expected to be self-serving, the panel must record its appreciation of the great candor displayed by staff in these materials as well as during our extensive interviewing of them -- individually and in groups of various sizes.

- Responses to queries asking for their perceptions of ISNAR have been received from the NARS with which ISNAR has worked as well as from donors and other IARCs.

- Direct testimony from the Institute's partner countries has, in addition to the questionnaire responses, been conveyed by requests (including follow-on requests) for ISNAR services, and by other means.

- For the Panel, one of the most important of these "other means" has been provided by the visits that, over the space of two to three weeks in June 1991, Members of the Panel in groups of two to eight paid to eight countries -- Indonesia, Sri Lanka, Burkina Faso, Ghana, Kenya, Tanzania, Uruguay, and Costa Rica. These were strenuous visits involving meetings with ministers; officials; NARS officers and personnel; relevant members of the local NGO, university, and business communities; and international center representatives and donor representatives. These interviews permitted a cross-referencing of estimates of ISNAR achievements and miscues.

- The panel has had some exposure to a replication of some of the training and research seminar ISNAR has done in developing countries, and the group has extensively sampled ISNAR's large published output and much larger output of working-paper and other ephemeral materials.

The burden of all this evidence and testimony is overwhelmingly positive. As noted below, there have been weak points. But the clients mostly range between satisfied and enthusiastic. The CGIAR and development cooperation communities are largely favorable. And, while it is early for judging the results of, as opposed to the inputs to, ISNAR's efforts, the Panel's country visits have found and/or confirmed several clear cases in which ISNAR interventions (in some cases, ISNAR persistence) have played major roles in better management breakthroughs in the structuring and/or conduct of agricultural research. Ghana, Kenya, Uruguay, and Costa Rica all are such cases, and there are others.
2.3.2. Flaws and Shortfalls

The Institute's record is far from perfect. Morale is said not to be what it was in the first years; indeed, the Panel finds it quite worrisome, although this is the kind of issue on which one must be on guard against snapshot impressions. There is something of a two-cultures tension (field-seasoned practitioners versus younger disciplinary researchers). There are administrative irritations. The organizational structure lacks enough structure to work well. Recruitment has been uneven, and so has the quality control on some of ISNAR's written products.

2.3.3. But Learning Curves, Gestation Periods, and the On-Balance Assessment

In a sense, however, this kind of point scoring is gratuitous against an institution with so complex an assignment as ISNAR's -- especially a new institution. Quite clearly, in the work we have reviewed and the countries visited, ISNAR has been learning. It does not, for the most part, repeat its mistakes. It is more effective than it was five, let alone ten, years ago. It is less naive about the politics of its clients, and it has learned better the (often agonizingly slow) rhythms of agricultural research program change in developing countries. Thus, in some of its client countries intensive efforts have taken about twice their expected duration but are just now ripening into readiness for major achievements. There is no other actor on the agricultural development scene as experienced or equipped as ISNAR for pressing improved research management third world wide, and ISNAR's capacity for a pivotal role is increasing.

2.4. The Claim for Medium-Term Additionality

In our view, therefore, ISNAR's case for a significant, albeit moderate, increase in its financial and personnel allocations within the CGIAR system is straightforward. While accepting congratulations for all that it is doing well, the Institute will need to work hard in the years ahead to repair the deficiencies noted in the balance of this review. But meanwhile, the CGIAR is calling for a relative increase in its allocations to institution building during the medium term, and ISNAR is the system's key institution-building global unit. It deserves a measured increase in real resources, in particular to support some additional professionals outposted to regional centers with which collaborative experiments and stronger outreach can be undertaken. ISNAR increasingly has been demonstrating the capability to make good use of such incremental resources.

2.5. Should the Institute Relocate?

This is an issue the Panel has not found the time to sort out to its satisfaction. The Netherlands, although it did not initially seek the establishment of ISNAR headquarters in Holland, is a gracious host, shows interest in ISNAR's work, and offers a number of operating advantages. On the other hand, as detailed elsewhere in
the review, the Institute’s Dutch location poses several significant problems, some of which are on the way to resolution but others of which (for example, the employment of spouses) resist solution because they require legislation politically difficult to obtain. Overhead costs and costs of in-house training both are higher than they might be in a developing country, and perhaps it is harder to raise donor contributions. We recommend that during the next three years the Institute’s management and board consider very carefully the pros and cons of relocation -- probably to a developing country. A new location would need to afford good travel connections and electronic networking. While these are increasingly available and while a number of developing countries might provide less awkward arrangements for employment of spouses than the Netherlands, it would be important to choose a developing country whose labor market offers comparatively abundant supplies of local-hire support and professional personnel. Thus, although the geographic center of ISNAR’s work is likely, during the next 10-20 years to be in sub-Saharan Africa, that region would probably be suboptimal for an ISNAR headquarters. We do not pursue the issue beyond raising it. But we repeat that it warrants fresh attention.
CHAPTER 3 - LEGAL STATUS, MANDATE AND GOVERNANCE

3.1. Legal Status of ISNAR

3.1.1. International Status

ISNAR was established in 1979 as a recognized international organization under Dutch law. Among the consequential privileges and immunities granted to ISNAR is favorable tax status for its staff. This definitely helps ISNAR attract high quality professional and support staff.

3.1.2. Employment of Spouses

For spouses who are not citizens of the European Community (EC), it is very difficult, though not impossible, to obtain work permits to work in The Netherlands. (It is slightly less difficult for US citizens, because of a special agreement between the US and The Netherlands.) No significant improvement in this situation is likely because of the Dutch and EC laws which apply. Employment opportunities in truly international organizations located in The Netherlands are very limited; there are some large EC organizations but they have restrictions for employment of non-EC citizens. This situation is a problem for ISNAR and may increase as it becomes more common for both members of a couple to work.

3.1.3. Applicability of Dutch Labor Laws

The original staff regulations did not contain an appeals procedure for staff in dispute with the Center. Therefore, their only recourse was to go to a Dutch court. In such a case, the Dutch court would hear the case regardless of the immunity granted by the Headquarters Agreement. This is because, where the staff regulations have gaps, Dutch labor laws apply. For example, if an ISNAR staff member is on a fixed-term contract which has been renewed, a Dutch court would regard this as constituting permanent employment.

The new staff regulations contain an independent appeals procedure. All staff hired since 1 April 1991 are covered by the new regulations. Existing staff have been offered the opportunity to sign new contracts based on the new regulations. Those who decided to maintain their existing contracts will be on the new terms when their contracts are next renewed. The changes made should protect ISNAR from the peril of lawsuits, while still providing staff with some recourse in the case of any dispute with the Institute.

3.2. ISNAR's Mandate

In ISNAR's revised constitution (1989), its purposes, principles, and activities are stated to be:
"The purpose of ISNAR is to help strengthen national agricultural research capabilities in developing countries. This includes assistance in identifying research problems and in formulating research strategies and policies, assistance in building up an adequate institutional infrastructure and other research facilities, as well as in promoting specific national or regional research programs. The ultimate goal is to assist developing countries improve the effectiveness and efficiency of their agricultural research systems through enhanced capacity in the areas of research policy, organization and management. To this end, ISNAR will also undertake research relevant to the organization, management and execution of agricultural research in developing countries." (The underlined section is given as ISNAR's goal in the document "Working to Strengthen National Agricultural Research Systems: ISNAR and its Strategy," 1987.)

The new constitution satisfactorily incorporates the changes recommended by the first EPR.

In view of the expansion of the CGIAR system and the increasing interest in forestry and fisheries in developing countries worldwide, thereby widening the scope of "agricultural" research as traditionally defined, should specific mention be made of these areas in ISNAR's mandate? We believe that ISNAR's revised constitution is sufficiently comprehensive: "ISNAR will be concerned with commodities and other renewable natural resources important to national development objectives including, but not limited to, the food commodities covered by other components of the CGIAR system."

3.3. The Board of Trustees and Its Performance

3.3.1. Membership

The ISNAR Board used to consist of 15 members and the last EMR recommended a reduction from 15 to 11 on the grounds that it was rather a large Board for a small institute. In 1986 the Board reduced its membership from 15 to 12.

In October 1990 the Director General suggested to the Executive Committee that the Board should be increased from 12 to 16 in order 1) to be able to give a place on the Board to one of the minor donor countries, some of whom are not represented on any CGIAR Board (but this is a System-wide problem); 2) to find a place for major donors who are important to ISNAR; 3) to be able to include wider representation from developing-country NARS.

The Board and its Committees have at various times stated that many of its members were not experts in ISNAR's specific field of research policy, organization, and management. We believe this to be a correct assessment, and it is our view that, up to now, too much attention has been given to "political" considerations in appointing Board members. These are important and should not be overlooked -- and are hardly likely to be! We think it is difficult for the Board of ISNAR to assess
the quality of ISNAR’s work and, in particular, the quality of its research and publications if it is weak in its experience and expertise in agricultural research management.

**Recommendation 3.1.**

*The Board should always have in mind that several members of the Board at any time should have experience and expertise in agricultural research management.*

The need for wide representation of developing-country NARS can be overstated: after all, ISNAR has experience now of working in 50 developing countries, has established very wide contacts, and is not short of requests to assist NARS (rather the contrary). Thus, the need is to find suitable individuals from developing-country NARS who are not only knowledgeable about their country and region, but have a wider and not a parochial perspective. In fact, ISNAR has in the past had some excellent Board members of that kind.

Nevertheless, we sympathize with the Director General’s request for some increase in the size of the Board at a time when funding is difficult, but believe that this is a matter for the Board itself to decide. A small increase in the size of the Board may be justified.

We commend the recently instituted induction procedure for new members of the Board which includes attendance at a Board meeting as observers prior to taking up membership.

An unsatisfactory feature is the recurring problem of the staggering of Board membership. Three members left in 1990, a further three are due to retire in 1991, only one in 1992, again only one in 1993, and none in 1994 (see Table 3.1.). We understand that ISNAR is trying to even out the pattern over time.

3.3.2. **The Board’s Role**

As part of the self-assessment process of the Board, its Chairman circulated a CGIAR-prepared questionnaire, and a summary of the responses was made available to us. The CGIAR Secretariat presented a stimulating analysis of this summary and of the conclusions that might be drawn from it. We comment here only on the few points which seem to be of major importance.

The present ISNAR Board see their role as being to make policy which the Director General implements and to provide oversight of all aspects of the center’s work. It believes that it is able to maintain its independence from management and to be well informed about the center’s operations. We concur. It also believes that it serves as a group of advisors to the Director General, which might seem contradictory, as making policy is distinctly more than giving advice, but perhaps this is a question of wording, i.e., the Board makes policy and also, on occasion, offers advice.
Table 3.1. Membership of the ISNAR Board of Trustees

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Will Mathieson</td>
<td>UK</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Luis Crouch</td>
<td>Dominican Rep.</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Kazi Braruddoza</td>
<td>Bangladesh</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Ro Hengster</td>
<td>Sweden</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Gelia Castillo</td>
<td>Philippines</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Robert Cunningham</td>
<td>UK</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Jacques Diouf</td>
<td>Senegal</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>William Gamble (DG)</td>
<td>USA</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Lowell Hardin</td>
<td>USA</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Jaap Hardon</td>
<td>Netherlands</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Ishmael Huriithi</td>
<td>Kenya</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Subii Qasem</td>
<td>Jordan</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Vernon Ruttan</td>
<td>USA</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Howard Stepper</td>
<td>Canada</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Werner Tretz</td>
<td>Germany</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Henry Carsalade</td>
<td>France</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Jacques Ekebil</td>
<td>Cameroon</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Carlos Lopez-Saubidet</td>
<td>Argentina</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>S. W. Sadkin</td>
<td>Indonesia</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Henri Mwandemere</td>
<td>Malawi</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Amir Muhamed</td>
<td>Pakistan</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>A. von der Osten (DG)</td>
<td>Germany</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Chie Nakane</td>
<td>Japan</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Enrico Porceddu</td>
<td>Italy</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Joab Thomas</td>
<td>USA</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>John Dillon</td>
<td>Australia</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Th. Wessels</td>
<td>Netherlands</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Guy Camus</td>
<td>France</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Lila Rakotovao</td>
<td>Madagascar</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Kengo Henni</td>
<td>Japan</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Naima Al-Shayji</td>
<td>Kuwait</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>C. Bonte-Friedheim (DG)</td>
<td>Germany</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Roberto Junguito</td>
<td>Colombia</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Kurt Peters</td>
<td>Germany</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Mohammed Yusof</td>
<td>Malaysia</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Lydia Makhubu</td>
<td>Swaziland</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Nicole Senecal</td>
<td>Canada</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
</tbody>
</table>

Total Trustees per Year 15 15 15 15 15 15 12 12 11 12 12 12

* J. Ekebil resigned before the end of his term in order to take the position of DG at IITA.

* A. Muhamed resigned shortly after joining the ROT in order to take a position at TAC

* M. Mwandemere resigned before the end of his term in order to take a position at FAO.

** Will start their functions in September 1991.

Average term: 4.6
Asked to state to whom the Board considers itself to be accountable, the CGIAR (as a group of donors) and ISNAR's clients in developing countries were named first. We believe that the Board should act as if it were accountable to, that is, answerable to, the CGIAR. The word "accountable" can also be taken to mean "working for," and in that sense, the Board are working for the clients whom ISNAR are trying to help.

Among the Board's own principal concerns were its ability to oversee ISNAR's use of human resources, its structure, and its programs. The question of ISNAR's internal organization and management has been highlighted by the Director General and is discussed in Chapter 5. Although the Board has some doubts about its ability to oversee the methods, systems, and processes for carrying out ISNAR's work, it seems to be satisfied with the selection of Board members and generally believes that it has the right mix of gender, nationalities, experience, and expertise. There is a contradiction here. We have already indicated our view that ISNAR's Board is not strong enough in experience and expertise in agricultural research management and we suggest that this is an important reason why it is limited in its ability to oversee programs.

It has happened for a variety of different reasons that in the last two years only a very limited number of Board members have participated in ISNAR's Internal Program Review whereas, for some time before that, the full Board participated. If the Board were somewhat increased in size and the Program Committee reduced in number (see sections 3.3.1. and 3.3.3.), it would help the oversight function of the Board (and also its future planning). It would also help if the Program Committee participated fully in the annual IPR. If this were held in November instead of December and concluded with a Board meeting, it would leave ample time for ISNAR to carry out certain necessary annual functions scheduled for that time (staff assessment, programming). A small but strong Program Committee would be better able to go into individual programs in depth.

The Board was most concerned about its ability to assess the Director General, to assess its own performance (as Board members), and to plan its activities ahead. Most Boards would sincerely have to confess the same and we believe that this is quite understandable as these functions are novel for some Board members. It points to the importance of always having on the Board a few particularly well-experienced members, such as the present Chairman. A background in management, of course, is helpful with regard to these functions, as well as an effective induction program for new members.

3.3.3. Management of Board Business

The Board has an Executive Committee (which also functions as the Audit Committee), a Program Committee, and a Nominating Committee. On average, the full Board, the Nominating Committee, and the Program Committee have recently met twice a year, and the Executive Committee three times a year. This seems to us to be about right; it is difficult to see how a Board could fulfill its functions unless it met at least twice a year. Several Board members expressed to us their view that
occasional Board meetings in developing countries would be beneficial. We know that other centers have followed this practice; in view of its financial constraints, ISNAR will need to take account of the high cost involved in reaching such a decision.

For a small center with a small Board, it may be quite appropriate for the Executive Committee to function as the Audit Committee also. It is, however, likely that even on the Executive Committee there will be members not familiar with the audit function. Therefore, if the Board is slightly increased in size and concurrently the size of the Program Committee is reduced (see below), it may be appropriate for the Board to set up a small Audit Committee.

The Program Committee used to have eight members (from a Board of 12), but in 1989 it was expanded to include all members of the Board. ISNAR is not the only center with this arrangement, which can work well but also in one case did not work well at all. In our view, a smaller Program Committee, particularly if in future it had expertise in research management, would be better able to discuss ISNAR’s programs and policies in depth.

Recommendation 3.2.

The Board should give serious consideration to reducing the size of its Program Committee.

The current rules and procedures of the Board and its Committees appear to us to be satisfactory, as far as we can tell. They may not require any changes other than those we recommend, but in view of the fact that IFPRI’s Board has recently rigorously reviewed and revised all its rules and procedures, we suggest that ISNAR take advantage of this and examine the revisions which they have made.

3.3.4. Assessment

In making an assessment, we have interviewed all members of ISNAR’s Board. We have in mind our experience of other Boards, the increasing complexity of the CGIAR system, and the complexity of ISNAR itself.

The Board does lack experience and expertise in agricultural research management, but we believe that it is functioning well. Its members contribute to its discussions and clearly take their responsibilities seriously. They have been helped in their duties by good minutes, good reporting by the Director General, and effective leadership by their Chairmen.
CHAPTER 4 - STRATEGY AND PRIORITIES

4.1. ISNAR’s Strategy: Highlights

ISNAR’s Board approved the Institute strategy "Working to Strengthen National Agricultural Research Systems" in 1986. Taking the last EPR recommendations into account, the Strategy set a direction for ISNAR’s evolution as a research-based service. Its three functional activities -- advisory service, research, and training -- would support each other in an integrated service to NARS.

Each activity was intended to make its special contribution as follows:
- advisory service was to have a direct impact on NARS; research was to improve the basis of this service; and training was to give it a broader impact.

The strategy made explicit a systems approach to strengthening NARS and identified 12 "Critical Factors" as the components of the system (see Figure 4.1). These were not only points of intervention in system-strengthening efforts but also themes around which research, training, and advisory service could focus.

The Medium-Term Plan 1988-92 made the Strategy operational by assigning resources among regions, across critical factors, and among the research, advisory, and training activities. It should be recognized that the problem of fitting together the three dimensions of ISNAR's activities is a difficult one. There is, in the first place, the geographic dimension, in which one finds notable regional differences among NARS, especially between sub-Saharan Africa and the other regions. Second, there is the downstream-upstream differentiation among research, advisory service, and training. Third, there is the thematic dimension provided by the Strategy’s critical factors, whether these are split equally into more and less urgent groupings, or into three or four thematic clusters.

4.2. ISNAR’s Planning Process

As soon as a new Director General took office in November 1985, the work of responding to the recommendations of the EPR and preparing the Institute’s strategy began. ISNAR produced its Strategy and Medium-Term Plan in accordance with TAC’s newly introduced five-year cycle. The planning process was carried out through interactions between the Staff Advisory Committee on Programs and Management, between the Committee and staff, between ISNAR and TAC, and in consultation with NARS leaders and donors. ISNAR’s Board of Trustees approved the Strategy for the Institute in June 1986. It was recognized that the Strategy would

---

1 These 12 factors are clustered in three groups for the Medium-Term Plan 1988-1992 as shown in Table 4.2. Subsequently they were clustered in four groups for the analysis of recommendations, as shown in Tables 4.4. and 4.5. Links between the NARS and policymakers are amalgamated with the first factor for the ranking analysis shown in Table 4.3.
Figure 4.1. ISNAR’s four themes and 12 critical factors

<table>
<thead>
<tr>
<th>The policy context of agricultural research</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Interactions between national development policy and agricultural research</td>
</tr>
<tr>
<td>2. Formulation of agricultural research policy: long-term planning, priority setting, and resource allocation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>The structure and organization of agricultural research</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. Structure and organization of national research systems</td>
</tr>
<tr>
<td>4. Links between the national research system and policymakers</td>
</tr>
<tr>
<td>5. Links between the national research system, the technology-transfer system, and farmers</td>
</tr>
<tr>
<td>6. Links between national research systems and external sources of knowledge</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>The management of agricultural research</th>
</tr>
</thead>
<tbody>
<tr>
<td>7. Program formulation and budgeting</td>
</tr>
<tr>
<td>8. Monitoring and evaluation</td>
</tr>
<tr>
<td>9. Information management</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>The management of resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>10. Development and management of human resources</td>
</tr>
<tr>
<td>11. Development and management of physical resources</td>
</tr>
<tr>
<td>12. Acquisition and management of financial resources</td>
</tr>
</tbody>
</table>
have to evolve, with continuous review and revision as operations were monitored and external forces changed.

In September 1986, consultations with about 30 NARS leaders led to the identification of six themes for priority attention. Further feedback from NARS came in the course of field missions and visits made by senior management prior to the formal publication of the Strategy in mid-1986. We believe that the need for involving NARS early on in the process of strategic planning cannot be overstated. According to the Panel survey of NARS leaders conducted for this Review, most of them would like to participate in the effort (see Appendix IV).

**Recommendation 4.1.**

**ISNAR should take appropriate steps to involve the NARS early on in the process of strategic planning.**

4.3. **Assessing ISNAR’s Strategy**

4.3.1. **Strategy Implementation**

The selection of six of the 12 critical factors for priority attention was based on, in addition to NARS’s advice, the following criteria: 1) factors frequently limiting the efficient functioning of NARS, 2) ISNAR’s comparative advantage in the specific area of concentration or the potential to develop it, and 3) a reasonable expectation of impact, given the level of investment ISNAR was able to make.

The six factors were:

(a) formulation of agricultural research policy: long-term planning, priority setting and resource allocation;
(b) structure and organization of NARS;
(c) links between the national research system, the technology-transfer systems, and farmers;
(d) program formulation and budgeting;
(e) monitoring and evaluation;
(f) development and management of human resources.

Later on, an additional factor, information management, was added. If and when more resources became available, ISNAR would move into the five remaining critical factors, but, for the near term, in-house diagnostic capacity was to be maintained. Information management is an example of a critical factor on which work became focused as resources were made available by a particular donor.

In the past five years ISNAR has:

(a) further developed its links with partner countries (there were 19 new NARS diagnostic reviews in 1986-91), donors, and the international community; it has
established itself as a center of expertise for institution building for agricultural research,

(b) worked toward the implementation of the concept that its outreach should be grounded on a core of in-house research, and developed deeper knowledge and understanding of the main critical factors that limit national agricultural research capacity in the areas of policy, organization, and management.

The last EPR's recommendations included: 1) ISNAR becoming a center of excellence in its field of expertise, 2) research as a legitimate function for backstopping the more downstream activities, 3) the need to spell out more clearly the priorities regarding countries and activities, and 4) the need to increase the number of publications in refereed journals. The signal for an upstream orientation was clear.

4.3.2. Performance and Impact

The Medium-Term Plan 1988-92 made the Strategy operational by assigning resources among the functional activities, among regions, and across critical factors. The planned allocations by functional activities and by regions are shown in Table 4.1.

The actual allocation of ISNAR's financial resources (1988-90) across the three functions -- advisory services, research, and training -- is also shown in Table 4.1. It seems to be consistent with the provisions of the Medium-Term Plan 1988-92, except that research's share is higher when planned special projects are taken into account. The regional balance seems so far to be somewhat more biased towards Africa and Asia than in the original Plan, leaving LAC and WANA below their planned shares. Regarding resource allocation by groups of factors, Table 4.2. shows the relative emphasis given to each group as measured by number of staff weeks, number of publications, and number of training events.

\[\text{From Table 2 in "ISNAR collaboration with NARS: Achievements, impact and constraints," paper prepared for the External Review, May 1991.}\]
Table 4.1. Resource Allocation by Function and Region: Planned (Medium-Term Plan) and Actual (1988-90)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Advisory Services</td>
<td>45</td>
<td>40</td>
<td>50</td>
</tr>
<tr>
<td>Research</td>
<td>20</td>
<td>25</td>
<td>22</td>
</tr>
<tr>
<td>Training</td>
<td>21</td>
<td>20</td>
<td>16</td>
</tr>
<tr>
<td>Management/Program Support</td>
<td>14</td>
<td>15</td>
<td>12</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>50</td>
<td>62</td>
<td>47</td>
</tr>
<tr>
<td>LAC</td>
<td>20</td>
<td>11</td>
<td>14</td>
</tr>
<tr>
<td>Asia and Pacific</td>
<td>20</td>
<td>21</td>
<td>30</td>
</tr>
<tr>
<td>WANAS</td>
<td>10</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

* Advisory services.
Table 4.2.  Relative Emphasis Given to Critical Factors, 1988-90
(percent)

<table>
<thead>
<tr>
<th>Groups</th>
<th>No. of Critical Factors</th>
<th>Planned Res. Allocation</th>
<th>By Staff Weeks</th>
<th>By Publications</th>
<th>By Training Events</th>
</tr>
</thead>
<tbody>
<tr>
<td>Policy</td>
<td>2</td>
<td>15</td>
<td>30</td>
<td>33</td>
<td>42</td>
</tr>
<tr>
<td>Organization</td>
<td>4</td>
<td>35</td>
<td>29</td>
<td>31</td>
<td>32</td>
</tr>
<tr>
<td>Management</td>
<td>6</td>
<td>50</td>
<td>41</td>
<td>36</td>
<td>26</td>
</tr>
<tr>
<td>Total</td>
<td>12</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Note: Percentages are for actual weeks allocated to specific critical factors and the same for publications and training events.

It is apparent that Policy has received more attention than planned, whether measured by the allocation of staff weeks, the number of publications, or the number of training events.

Table 4.3. provides a breakdown of the three groups in 11 of the critical factors and presents rankings according to five different indicators.

Table 4.3.  Ranking of 11 Critical Factors According to Five Indicators, 1988-1990

<table>
<thead>
<tr>
<th>CRITICAL FACTOR</th>
<th>R1(^1) Emphasis</th>
<th>R3(^3) Impact</th>
<th>R4(^4) Staff Weeks</th>
<th>R5(^5) Publications</th>
<th>R5(^5) Training Events</th>
</tr>
</thead>
<tbody>
<tr>
<td>Policy Interaction</td>
<td>6</td>
<td>4</td>
<td>5</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Planning &amp; Priority Setting(^*)</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Structure &amp; Organization(^*)</td>
<td>2</td>
<td>1</td>
<td>6</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Linkages with Technology Users(^*)</td>
<td>5</td>
<td>6</td>
<td>2</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Linkages with External Knowledge</td>
<td>11</td>
<td>10</td>
<td>10</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Program Formulation &amp; Budgeting(^*)</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Monitoring &amp; Evaluation(^*)</td>
<td>10</td>
<td>11</td>
<td>8</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>Information Management</td>
<td>8</td>
<td>7</td>
<td>7</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>Human Resource Management(^*)</td>
<td>4</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Physical Resource Management</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Financial Resource Management</td>
<td>7</td>
<td>8</td>
<td>11</td>
<td>11</td>
<td>11</td>
</tr>
</tbody>
</table>

* Factors selected for special attention by ISNAR.

\(^1\) Ranking of country officers' assessment of emphasis and impact -- from Fig. 5 in "Thematic development at ISNAR: Achievements, constraints and lessons."

\(^2\) Ranking from nongeneral actual data.
It is also clear that, with the exception of Monitoring and Evaluation, the rest of the six selected factors rank quite well across the five indicators.

For the 506 recommendations produced by the 38 country diagnostic reviews carried out by ISNAR, the following two tables, 4.4. and 4.5., show the relationship between the four groups of critical factors by region and by size of NARS (measured by number of scientists) respectively.

Table 4.4. **Recommendations by Groups of Critical Factors by Regions**

<table>
<thead>
<tr>
<th>REGION</th>
<th>Policy</th>
<th>Organization</th>
<th>Program Mgmt</th>
<th>Resource Mgmt</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anglophone Africa</td>
<td>36</td>
<td>30</td>
<td>10</td>
<td>27</td>
<td>100</td>
</tr>
<tr>
<td>Franco-Lusophone</td>
<td>35</td>
<td>29</td>
<td>13</td>
<td>23</td>
<td>100</td>
</tr>
<tr>
<td>Africa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asia &amp; Pacific</td>
<td>39</td>
<td>27</td>
<td>12</td>
<td>22</td>
<td>100</td>
</tr>
<tr>
<td>LAC</td>
<td>37</td>
<td>33</td>
<td>9</td>
<td>21</td>
<td>100</td>
</tr>
<tr>
<td>WANA</td>
<td>44</td>
<td>22</td>
<td>12</td>
<td>22</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 4.5. **Recommendations by Groups of Critical Factors by NARS Size**

<table>
<thead>
<tr>
<th>SIZE OF NARS 1)</th>
<th>Policy</th>
<th>Organization</th>
<th>Program Mgmt</th>
<th>Resource Mgmt</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 48</td>
<td>28</td>
<td>47</td>
<td>11</td>
<td>14</td>
<td>100</td>
</tr>
<tr>
<td>48 - 110</td>
<td>23</td>
<td>41</td>
<td>12</td>
<td>24</td>
<td>100</td>
</tr>
<tr>
<td>111 - 183</td>
<td>29</td>
<td>44</td>
<td>7</td>
<td>20</td>
<td>100</td>
</tr>
<tr>
<td>184 - 253</td>
<td>27</td>
<td>32</td>
<td>15</td>
<td>26</td>
<td>100</td>
</tr>
<tr>
<td>&gt; 253</td>
<td>29</td>
<td>40</td>
<td>8</td>
<td>23</td>
<td>100</td>
</tr>
</tbody>
</table>

**Note:** Intervals give number of scientists, i.e., 48-110 means NARS with more than 48 scientists up to 110. Of the total number of recommendations produced for that interval of NARS, 23% were in Policy, 41% in Organization, 12% in Program Management, and 24% in Resource Management.
Both tables show that most of the recommendations are within the Policy and Organization grouping of factors, reflecting perhaps that the NARS that were reviewed faced more serious limitations in those two areas. It is also clear that no pattern of recommendations emerges: choices of critical factor emphasis have not differed systematically, either across regions or across size of NARS.

One might have expected that larger, more mature NARS would have found more limitations in Management than in Policy or Organization, but, regardless of the size of the NARS (as shown in Table 4.5.), the pattern of recommendations has been approximately the same. The explanation might be that diagnostic review teams have usually been led by people with more expertise in Policy and Organization than in Management, or it may simply be that, when ISNAR begins a serious institution-building involvement in a country, it tends to start with broader, macro issues -- and then later goes to more micro aspects of Management. It might also be that the lack of differences among regions or sizes of NARS just reflect actual conditions.

This analysis points out the value of focusing on actual constraints faced by NARS as the base for organizing diagnostic reviews. Exploratory missions should help decide the most suitable team composition to focus on the critical factors most relevant for each review.

4.3.3. Analysis and Recommendations

Despite the fact that since the last EPR, ISNAR has introduced improvements in the methodology for setting priorities among countries and critical factors, it was not clear to us how ISNAR takes into account variables such as different stages of development or the maturity of the NARS. Furthermore, we are not sure how the Institute selects countries where work will result in high potential spillover benefits to other countries as well as to ISNAR's own programs, or if indeed it makes a selection on this basis.

We see NARS as changing over time; in their evolution they generally move from concerns about structure and organization to management types of problems. In the course of this process, new institutional technologies are required at all points in the continuum from policy factors to management processes. For example, there are some mature NARS that have already made significant advances in institution building and organizational problems, and these NARS are now searching for new models (privatization, joint ventures with the private sector, integration with agricultural universities, etc.) as a consequence of political changes seen as necessary by the state. Therefore, ISNAR could have a variety of countries within its portfolio: some with which it could develop collaborative research in the policy context area, others with which it could work on strategy and organizational factors, and still others with which it could work with on management processes. These NARS would not necessarily be all candidates for the DPI scheme, but the countries would be likely to show an interest in this type of venture, and they would have researchers or managers who could participate in collaborative arrangements of this sort.
During the period 1986-90, reviews were carried out by ISNAR in 19 NARS (compared with 25 in 1981-85). For many of those countries, the review phase is now over, and more are seeking assistance from ISNAR in planning. ISNAR is expecting that some of the larger NARS may be soon asking for "second-generation reviews." Surely in some cases, second-generation reviews will be needed, but monitoring of changes and working with groups of countries and factors is an alternative approach.

We understand that building a coherent national research system, often having to coordinate diverse institutions and obtain the necessary resources, is a lengthy process requiring long-term, sometimes intensive assistance from ISNAR. Since the nature of this process necessarily limits ISNAR's intensive institutional building commitment to a few NARS at a time, we believe that this approach should be primarily restricted to the poorer countries. Other countries may require assistance only on some factors. The number of countries assisted on this basis could be expanded considerably, provided that appropriate tools for the management of research become available.

In addition, there are countries or regions where training is the path through which dissemination of tools and procedures takes place. Depending on their stage of maturity, regional groups of NARS could be the clients for different types of training.

The Panel is aware that it would not be appropriate to use a mechanical approach to making decisions on selecting partner countries, but we believe that ISNAR should be able to develop clearly defined procedures for incorporating these considerations to the country selection process.

Recommendation 4.2.

ISNAR should develop a more effective scheme for setting priorities among countries and regions according to the stage of development and needs and opportunities of the different NARS.

Concern about the issue of the Institute's involvement in the implementation phase was mentioned to us by many ISNAR staff. In the diagnosis-planning-implementation scheme for advisory services, we see ISNAR's comparative advantage as being in the first two activities, and not in implementation. The last EPR recommendation was that ISNAR should refrain from becoming involved in implementation beyond the project preparation stage, except by way of advice, counsel and training. Our view, however, is that although ISNAR should not become a general contractor for implementation, the "architect" should not be dismissed during the "house-building" phase.

The question is how ISNAR staff can be involved in the implementation phase, without becoming advisors to the director of the NARS, or members of a development agency. We believe that some involvement of ISNAR staff in the implementation phase is desirable, particularly for monitoring project execution and
introducing needed adjustments in the planned activities of system building. Perhaps counseling and advice is enough to keep the "architect on board during the house-building phase," but to do such counselling, one has to be present, at least at crucial decision-making stages.

We believe there are at least two interrelated strategies that could facilitate some involvement of ISNAR staff in the implementation stage: one is through outposting staff, although the primary objective of the outposting should not be implementation; the other is through closer links with regional and international technical assistance or development organizations.

Outposting staff is an issue that has been discussed frequently by the Board and Management. The current policy is that the Director General determines whether staff should be outposted, and the Medium-Term Plan 1988-90 in fact contemplated having seven outposted research management specialists by the end of 1992. The Medium-Term Plan also stated that outposted personnel should be full ISNAR staff members, representing an extension of its core program with the NARS of a given country, and that they should receive technical backstopping from ISNAR headquarters staff, particularly on the application of improved management tools.

Our view, despite the Medium-Term Plan's statements on this matter, is that ISNAR never really developed an "outposting philosophy." The outposting of personnel that has been done in the past has basically been donor-driven in the absence of adequate support from ISNAR's core program.

We believe that outposting, whenever there are opportunities, should be a deliberate policy when appropriate management tools are at some advanced stage of development, and when testing or validation is required within the framework of national programs. The primary objective then, should not be to merely assist a particular country in its needs for agricultural research organization and management, but, under the real conditions of a national program, to work out the kinds of "intermediate goods" that are subject to ready adaptation to specific local circumstances. Later on, neighboring countries could be reached by dissemination via training and other multipliers.

The target for outposting should be primarily a region, rather than a particular country, preferably with staff posted to a regional or international organization. Otherwise, as ISNAR is a management institution, an outposted staff member may end up being used as an advisor to the director of the country's research system and may often end up being burdened with line responsibilities.

We understand that ISNAR's professional staff are already stretched and that when senior staff are outposted, the opportunities for their contribution to the intellectual critical mass at headquarters is partially lost. Therefore, as indicated in Chapters 2 and 13, we believe that an increase in core funding would be justified to support outposting. The advantages would be to increase the positive impact ISNAR could have on NARS and to provide closer involvement in the implementation phase.
Closer links with regional and international organizations whose mandate is that of technical assistance and project implementation provide an alternative way for ISNAR to be involved in the implementation phase. Such organizations usually maintain offices in each country and maintain relations with the NARS through technical assistance projects. We suggest that ISNAR keep some involvement in the follow-up and implementation of national agricultural research plans, particularly in the poorer countries requiring long-term assistance. Outposting and closer links with regional and international development agencies can facilitate such work.
CHAPTER 5 - THE STRUCTURE OF ISNAR AND ITS MANAGEMENT

5.1. Introduction

At the time of the last Review, ISNAR had a highly centralized structure, no Deputy Directors General, and all the Research Officers/Senior Research Officers as well as the Administrative Officer and Executive Officer reported to the Director General. This structure (the hub-and-spokes model) worked well when ISNAR was small and the Director General was able to have close relations with all the professional staff and maintain a grasp of the whole. Research, at that time, was a minor part of ISNAR's activities. The EPR recommended that research should grow to receive at least 15% of ISNAR's resources, that one Deputy Director General should be appointed, and that some form of middle management should be introduced.

5.2. Leadership: Board and Senior Management

The right balance between the Board and senior management at a center of the CGIAR system is a matter of continuing debate. The centers are autonomous and the balance will be different in each, and will change with time, depending in large part on the composition of the Board, the style of the Director General, and also the changing organizational culture of the System. Although there is some concern about the quality and strength of the CGIAR Boards, it is still believed that the System can only work if directors general are strong, independent-minded, and innovative, and if the institutes remain genuinely autonomous. The corollary is that, although boards should not interfere in management, they need to be strong enough (in character, expertise, and experience) to fulfill their roles in policy and oversight. That means, for example, having the capacity to ask searching questions and to recognize whether a real answer is being given. As noted in Chapter 3, the present ISNAR Board, though its composition needs to be improved, is fulfilling its duties and is ably led by its Chairman. Both the Board and the Institute have strong leaders and our appraisal is that the balance between Board and Senior Management at ISNAR is appropriate.

5.3. The Present Structure of ISNAR

The present management structure at ISNAR is quite unsatisfactory, partly because of the separation of responsibilities between advisory services on the one hand and research and training on the other, and the lack of middle management. The Director General and his staff are well aware of this and have made constructive suggestions regarding possible changes.

The present structure, often described by ISNAR as "flat," is shown in Figure 5.1. In management parlance, it is the "sausage" model, in that there is no middle
management. Below senior management there is a "bag" or "sausage" comprising the human resources of the professional staff who can be allocated in various combinations as required: to research, advisory, or training duties, to a particular region or country, or to one or more of ISNAR’s critical factors.

To facilitate research on the latter, there are Working Groups, each with a coordinator. These coordinators have responsibility but no real authority; although the staff who are members are supposed to devote a few weeks of their time to such work, the coordinators have no authority to manage their time. With one exception, the few Working Groups which have been effective are the ones which had significant resources through special projects. It is difficult in a flat structure to form teams, and it is generally felt by ISNAR staff, and we agree, that for the most part the Working Groups have not succeeded; a different arrangement is needed.

The last EPR recommended that ISNAR should have one Deputy Director General. In the event, two were appointed, one with responsibility for advisory services and the other for research and training. In view of the fact that it was also the intention to integrate these three functions much more closely, with each member of the professional staff contributing, to varying degrees, to all three functions, this division was unfortunate and is perceived to have impeded integration.

Although the commitment of the Senior Management to ISNAR is not in doubt, the present structure is felt to be unsatisfactory, not only because of the lack of middle management, but because of a lack of clear hierarchy and line management at the very top. In the Office of the Director General, what exactly are the responsibilities of the Director General and of each of the two Deputy Directors General? Staff often do not know whom really to approach, their choice is made subjectively; overall there is no consistency, and too much depends on the decision of the Director General himself. We seem to be back with the hub-and-spokes model; the difference is that ISNAR has virtually doubled its size and the model no longer works. We appreciate that in part the delay in making any change has been due to the postponement of the present review by almost a whole year; hence, the consideration of a more appropriate structure is one of the key issues in our review.

A further question about the present structure is the extent to which it permits effective coordination of ISNAR's efforts in a particular region or country. Many of the professional staff of ISNAR are designated Country Officer for one or more countries. Some are very experienced in the countries which they serve and have done good work there by succeeding in establishing effective personal relationships with key staff in both government and the local NARS. To coordinate effectively the variety of ISNAR activities taking place in some countries -- advisory, research, training, core, and special projects -- is a very demanding task. Many NARS leaders take the view that ISNAR should outpost staff to the major regions. There is now a growing possibility of making ISNAR's limited resources more effective by using successful NARS improvements in one country as a springboard for extending that success in neighboring countries, perhaps by outposting some staff to Ecoregional Centers. However, unless ISNAR's core resources are significantly increased, that could not be done without reducing staff at headquarters.
5.3.1. Staffing and Organizational Culture

ISNAR's organizational culture has many of the features one would expect to find in a highly professional institute, with hard-working self-critical staff who take pride in their work. At the time of the last Review there was a marked division in the staff between "generalists" and "specialists," the former being, in the main, older agricultural scientists with long experience of working in developing-country NARS, and the latter, younger social scientists interested in research. Since the last review, the proportion of social scientists has very considerably increased (see Chapter 10). Although those particular terms (generalists, specialists) are no longer in general use, one has only to ask staff how they perceive the direction in which ISNAR has been going and ought to go in future, to realize that a wide divergence of views, related to personal experience, still exists. Thus, some argue that ISNAR is still not a research-based institute, but that is what it should become; others say that those committed to research are too academic, much more interested in pursuing their careers by publishing papers and books than in helping NARS, and that virtually no really tested and usable tools have yet emerged. These perceptions also arise because the present structure emphasizes the work of individuals (the Lone Ranger syndrome); effective team work is difficult to implement.

It must be recognized that this division is natural and one of temperament; there are and always will be people more attracted to and more effective either in "upstream" or in "downstream" work. What does matter is whether they respect each other, recognize that each can make a valid contribution to the institute's work, and can work together effectively as necessary. In that respect, the situation at ISNAR gives some cause for concern. In addition, the relative priority given to the two trends of activity -- upstream and downstream -- is a primary question for ISNAR.

It is a perception of staff that there has been a change in the attitude towards administration. Although the new staff regulations have improved some benefits and introduced essential staff appeal procedures, they are widely felt to be excessively bureaucratic and more suited to a very large organization than to a small, highly professional institute like ISNAR. Some of the numerous comments we have received seem to us to be exaggerated; we see them as being more a symptom of a deeper dissatisfaction with ISNAR as it is at present.

5.3.2. Present Management Committees

The committees which exist at present are listed in Table 5.1 and for the most part are described in the appropriate chapters of our report. Here we note that the Management Committee consists essentially of the Office of the Director General, together with the Administrative Officer and a staff member as Secretary; there being no middle management, it cannot be represented. The Staff Advisory Committee on Programs presently has rather a vague role, which needs to be reconsidered.
<table>
<thead>
<tr>
<th>Committee Name</th>
<th>Members/Chairman</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Management Committee (1990)</strong></td>
<td></td>
<td>Function: to keep abreast of developments and decide on important issues.</td>
</tr>
<tr>
<td>The Director General</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Deputy Directors General</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Administrative Officer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Projects and Development Coordinator (Secretary)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Purchases and Contracts Committee (1990)</strong></td>
<td></td>
<td>Function: to check that bidding and evaluation rules are followed, to review submissions, and to recommend selections.</td>
</tr>
<tr>
<td>3 Senior Research Officers (one Chairman)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Senior Research Officers (Alternate members)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 Secretary</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Staff Advisory Committee on Programs (from before 1985)</strong></td>
<td>9 Senior Research Officers (one Chairman)</td>
<td>No authority. Function: to review requests from NARS; advise on workshops, research, and special projects, etc.</td>
</tr>
<tr>
<td><strong>Staff Advisory Committee on Administration (from before 1985)</strong></td>
<td>4 Senior Research Officers (one Chairman)</td>
<td>No authority. Function: to advise on issues submitted by management or staff.</td>
</tr>
<tr>
<td>1 Research Associate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 Research Assistant</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Support Staff</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Staff Advisory Committee on Publications (from before 1985)</strong></td>
<td>6 Senior Research Officers (one Chairman)</td>
<td>No authority. Function: to review documents for publication; to advise on publications.</td>
</tr>
<tr>
<td>Head of Publications</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 Editor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 Research Officer</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Staff Advisory Committee on Information Management (1988)</strong></td>
<td>1 Senior Research Officer (Chairman)</td>
<td>No authority. To advise on computer hardware and software and other information resources and their management.</td>
</tr>
<tr>
<td>1 Research Officer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Librarian</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 Editor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Projects and Development Coordinator</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 Research Associate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Support Staff</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
5.4. Suggestions for Improving ISNAR's Organizational Structure

The principles underlying our suggestions are the following:

1) the present span of control of the Director General is impossibly wide and must be reduced;
2) there needs to be a clear hierarchy, including middle management, with definite line reporting and some delegation of budget authority;
3) the respective roles of the Director General and Deputy Directors General also need to be defined;
4) the structure should facilitate teamwork and foster upstream-downstream collaboration as well as regional coordination;
5) the structure should be recognizable as being in accord with ISNAR's mission and strategy to serve NARS.

5.4.1. Possible Models

There has been quite a ferment within ISNAR on the structure question and a variety of models have been considered in the numerous documents made available to us, which we have found very useful. It seems that a consensus is emerging, at least on certain critical points. Some kind of matrix in ISNAR's mode of working is unavoidable but that does not mean that a formalized matrix structure is the best solution. (It is also a possibility, but has been found elsewhere to require a very demanding management input.) If there are to be a number of programs with line managers, then the question is on what basis the primary division is to be made. No one seems to be suggesting that this should be by advisory-research-training, and we agree. We are left with a choice between division by themes, or by regions.

Figure 5.2 shows a model based on division by themes. For the sake of simplicity (not as a recommendation for actual titles to be chosen by ISNAR) we have used the terms "policy," "organization," and "management" for these programs based on combinations of the 12 critical factors. A fourth program is our version of ISNAR's "institution-building;" we simply call it "outreach."

In this scheme, the Program Directors would be genuine line managers, responsible for their staff (and therefore would examine their staff's annual work plans and participate in their assessment) and would be delegated appropriate budgetary authority. Like all staff, they would be employed on fixed-term renewable contracts and might be changed as the program emphasis develops and changes. The Director of Outreach would have appropriately specialized staff, as well as the Training Unit and Information Unit reporting to him/her, so that all those concerned with "delivery systems" would report to the same Head. The Regional Coordinators might be located within other programs, depending on their particular expertise, but as far as their regional coordinating role is concerned, they would report to the Director of Outreach. If it turned out that their role were a full-time function (which might be the case for some and not others), they would be located entirely in the Outreach Program. Staff outposted to ecoregional centers (see Chapter 12) would report to the Regional Coordinators.
As in proposals in some of the current ISNAR documentation, there would be one Deputy Director General. Once that person is chosen, the roles and responsibilities of the Director General and the Deputy Director General would have to be defined; presumably, one would be more concerned with programs and the other with outreach, and there would be clear reporting lines between line managers and either the Director General or the Deputy Director General. The Administrative Officer, who is rather overburdened at present, would no longer be responsible for computing and would be able to devote more attention to staff development (see Chapter 10). As far as the balance between the three thematic programs is concerned, the proposal in the paper "Key Elements of ISNAR's Revised Strategy" was for an equal effort in the three. We suggest that the first, which we have called "policy" (research policies and system strategies) should be the smallest; emphasis should be given to the other two, which are concerned, as we see it, with tool development.

Figure 5.3 shows a different model, with three thematic programs, without a separate outreach program, and Training and Information combined. To ensure that outreach activities receive the requisite resources and are coordinated, staff in the three programs would, as far as their institution-building work is concerned, be responsible to either the Director General or the Deputy Director General, as would the Regional Coordinators and their Support Unit.

Figure 5.4 shows an alternative model based on a division between regions. As in the previous models, the Program Directors (who in this case are obviously also the Regional Coordinators) are line managers with delegated budgetary authority.

We can now return to the principles enunciated at the beginning and use them to compare the three models. With regard to span of control, introducing effective middle management (thereby creating career development prospects) and defining the respective roles of the Director General and the Deputy Director General, there is little to choose between them (the span of control is slightly larger in the third model). The first model (Figure 5.2) may be regarded as failing to resolve the continued division between the thematic programs (which could be looked upon as research dominated) and outreach (advisory services), even though each thematic program is supposed to integrate research, advice, and training.

The second model (Figure 5.3) attempts to deal with this by not having a separate outreach program; the hope would then be that by this means there would be a better integration of the spectrum of activities within each program. The authority of the Director General or Deputy Director General (whichever has the special responsibility for outreach) should ensure that research does produce the tools which are actually needed for advisory and training activities. But this also means that in this model considerably heavier line management responsibilities fall on either the Director General or the Deputy Director General.
Figure 5.3.

Board of Trustees

Nominating Committee  Executive Committee  Program Committee

Office of the Director General
Director General
Deputy Director General

Management Committee

Program Committee

Program Director Policy  Program Director Organization  Program Director Management  Support Unit  Administrative Officer

Staff
- Advisory
- Research
- Training

Staff
- Advisory
- Research
- Training

Staff
- Advisory
- Research
- Training

- Training
- Information

- Finance
- Personnel
- Maintenance
- Host-country relations

5 Regional Coordinators

Outposted staff at ecoregional IARCs
Figure 5.4.

Board of Trustees

- Nominating Committee
- Executive Committee
- Program Committee

Office of the Director General

- Director General
- Deputy Director General

Management Committee

- Program Committee

Program Director

- Program Director WANAFR
- Program Director Francophone Africa
- Program Director Latin America
- Program Director Asia

Training Unit

- Information
  - Publications
  - Library
  - Computer

Outposted staff at ecoregional IARCs
It seems to us that the dynamic tension between advisory services and research is inherent in ISNAR’s mandate, and not unique to ISNAR, being similar to the research-extension link problem. Obviously, regional coordination will be very strong in the third model (Figure 5.4) but it is difficult to see how research relevant to ISNAR’s mandate can be sensibly regionalized, even though it is recognized that regions differ. Each model necessarily emphasizes one axis of an inescapable matrix, and will foster teamwork on a predominant axis, somewhat at the expense of the other.

We recognize that ISNAR’s program has developed and the laudable attempt, first to identify critical factors and then to define a smaller number of coherent themes, is a continuing process which, obviously, would be facilitated by the first two models and probably impeded by the third. It seems to us that this is a very important consideration which probably outweighs the fact that to an outsider presented with an organization chart, the third model is instantly comprehensible. On the other hand, if ISNAR has a global mandate and is supposed to be research-based, why regionalize to that extent? The first two models also try to give weight to the regional axis.

Guided by the principles which we are sure that ISNAR accepts, we believe that ISNAR can decide on a suitable model.

Recommendation 5.1.

There should be one Deputy Director General (as the structure is being significantly changed, this should be recognized as a new position, internationally advertised).

Recommendation 5.2.

Three or four Program Directors should be introduced with line responsibilities for staff and budgetary authority.

5.4.2. Management Committees and Their Function

To improve internal planning, coordination, and communication, ISNAR’s committees need some revision in accord with the changed structure. The Management Committee should be reinforced by being joined by the Program Directors, and among other tasks, this committee should recommend decisions regarding the allocation of the resources between the programs. (This is strictly analogous to the top-down decisions made by a biological institute in allocations to commodities/research programs.) There needs to be a Program Committee making bottom-up proposals in both program and special projects with recommendations for decisions by the Management Committee (just as the Research Committee of a biological institute makes proposals regarding the detailed content of work on, e.g., one particular commodity). Clearly, the Management Committee is the senior committee and therefore the Program Committee is advisory to it, but if management
is to work, the Program Committee needs to be taken seriously. The word "advisory" should be removed from the title; its revised terms of reference would state that it is advisory, but to spell out that the committee will have "no authority to direct, change, or modify ISNAR's program" as at present, is not only redundant (the point is completely covered by the word "advisory") but implies mistrust and is totally inappropriate.

The Program Committee should be chaired either by the Director General or by the Deputy Director General, depending on their division of responsibilities. The Program Directors and two other Senior Research Officers (one of the latter could be the Secretary) would be the members.

5.5. The Planning, Budgeting, and Review Process

ISNAR is well advanced in preparing a revised strategy document for Board approval and is carrying out this task by a participatory process which is involving staff and considering the interests of clients and stakeholders. We hope that the process can now be completed rapidly and that ISNAR will strive to produce a short, crisp document.

Future preparations of Medium-Term Plans will follow the new strategy, which should state how ISNAR is going to choose its priorities. Each program should have its own goals, have its own budget, and be effectively led by its Program Director. This will strengthen middle management at ISNAR. The institute should strive to be less project driven in its research, but we appreciate the difficulties experienced with the donor community. To aid the planning process, we suggest that ISNAR adopt the procedure which has been found to be useful in developed-country research organizations and elsewhere, the top-down and bottom-up approach briefly described above under 5.4.2. The process should be facilitated by further development of the PMIS.

In future, monitoring of ongoing work will largely be the responsibility of Program Directors, as well as the leaders of Special Projects. They need to receive regular expenditure statements through the PMIS and also regular results on the progress of all "projects" (meaning any coherent activity, not only Special Projects). Once a year, or more often as the need arises, each Program Director should send a formal report on the work of the whole program to the Management Committee.

ISNAR's internal program reviews, in which members of the Board's Program Committee have participated, have clearly been beneficial and well carried out. We hope that the internal program reviews will continue to play an important part in improving internal coordination and communication in ISNAR.
CHAPTER 6 - ADVISORY SERVICES

6.1. **ISNAR Approach**

6.1.1. **Overview**

ISNAR is a service-oriented institution which provides assistance to a country only at the country's request. In choosing to which requests to respond, ISNAR uses a set of criteria that include the relevance of the request to ISNAR's mandate, ISNAR's capacity to deliver the services, the ability of the country to benefit from them, and where a large number of poor could be helped by ISNAR's actions. During the past five years, ISNAR has worked with a relatively larger number of countries.

The Institute's collaboration with NARS varies widely, depending on the stage of development of the NARS. The advisory service is the primary contact point between ISNAR and NARS, offering what the Institute can contribute to effective research institution building. The interaction permits ISNAR to become acquainted with the NARS, with their strengths and weaknesses. Generally the service is carried out in three major stages: a diagnostic review of the NARS, a planning stage to tackle the problems identified in the review, and an implementation stage.

6.1.2. **Components of the Advisory Service Program**

6.1.2.1. **The Diagnostic Phase**

In this phase, which is sometimes preceded by an exploratory mission, the weaknesses of the NARS are identified and ISNAR helps outline a system-building strategy to deal with them. Because the future of their relationship depends on the conclusions of this diagnostic review, ISNAR typically undertakes such a review before other activities are started. This diagnostic phase takes from a few weeks to six months and yields a review report that is presented to the NARS and the government of the country. As recommended in the last EPR, ISNAR has endeavored to support its activities in this phase largely from core funds (see Table 1.1.).

6.1.2.2. **The Planning Phase**

In this phase, the researchers in the NARS and the policymakers of the country, with the participation of ISNAR, convert the suggestions of the diagnostic review into specific plans and strategies for the research system, taking into account the political and economic environment and the human and financial resources of the country.
6.1.2.3. The Implementation Phase

In this phase, as a matter of policy, ISNAR’s involvement is limited. The type of help and support needed are not funded from ISNAR’s core budget. The plan is implemented by the country from its own resources or with technical assistance funded from multilateral or bilateral sources. Despite this, ISNAR continues its collaboration with the NARS through periodic visits and by providing advice in terms of option analysis and specific methodologies, e.g., program formulation, priority setting, financial and human resource management.

6.2. Achievements and Impact

The long-term nature of institution building, especially in NARS, is greatly affected by socioeconomic and political forces beyond the control of the research agencies. This makes it difficult to assess the performance of ISNAR’s Advisory Service Program. Moreover, because many other international organizations may work with the same NARS, it is difficult to differentiate the results of ISNAR’s actions from those of the others. Quantifying ISNAR’s impact is made additionally difficult by the Institute’s policy – which in our opinion is right -- of leaving it to the NARS themselves to take credit for their successes. In this section of our report, the main sources we draw on are ISNAR’s extensive efforts at self-analysis of impact (see documents listed in Appendix V), our own survey of NARS (Appendix IV), and our impressions from our country visits (see list in Appendix III).

During the past five years, ISNAR has worked with 27 countries and one regional institute and has conducted 19 diagnostic reviews of NARS bringing the total completed since ISNAR began to 43. Background prepared for the Panel states that, in order to have a better understanding of the output, ISNAR analyzed the 506 recommendations made in all the 38 national reviews done so far. Of these recommendations, 40% were related to the structure and organization of research systems, 27% to research policies and priorities, 11% to program management, and 23% to the management of resources (mainly human).

In these diagnoses the most important aspects of NARS requiring improvement in institution building were perceived to be the structure and organization of the research system, methods of setting research priorities, planning, and resource allocation. The areas of program and resource management, although important, were of less concern.

In cooperation with ISNAR, 16 countries have developed a strategic national agricultural research plan. The plans were developed in some cases with ISNAR’s direct involvement, in others ISNAR helped with methodology and tools.

Collaborating with NARS has taught ISNAR a number of lessons. ISNAR’s capacity to give effective advice has been gained from a better understanding of the problems faced by NARS. One of the major findings -- that it may take ten years or more to build strong and effective research institutions in NARS -- is an example of
the developing body of corporate knowledge that should help ISNAR shape a more realistic strategic plan. ISNAR concludes, in its report "ISNAR Collaboration with NARS: Achievement, Impact and Constraints," prepared for this Review, that its suggestions on how to strengthen the structure and organization of research have been adopted by 50% and have made significant changes in 42% of the countries with which it has worked. In policy and planning, program management, and resource management, ISNAR's approaches and methods were adopted in 76%, 54% and 33% of the countries, respectively, and significant changes occurred in 47%, 39%, and 27% of them, respectively.

The same document also says that in 70% of the countries ISNAR dealt with, national political support increased, while in about 60% research policies were clarified and related to economic development. In more than half of the countries, international financial support has increased and donor-funded projects have been better focused on national priorities, in some measure because ISNAR's assistance in preparing projects not only improved the content, but also added a neutral and credible dimension to the project proposals.

In this respect, it is important to note the valuable assistance of ISNAR to countries such as Ghana, Madagascar, and Indonesia in preparing World Bank projects. ISNAR also believes that the collaborative relationships between NARS and technology-transfer agencies have improved in nearly half of the countries with which they have collaborated, and that in the same countries the linkages between research and producers have become stronger. On-farm research as well as linkages between government research institutions and universities were both improved in 40% of the countries, in one-third of which there was better interaction and coordination between research institutes. Improvements in medium- or long-term research planning have been noted in 80% of the countries, while priority setting and planning the development of specific critical factors were better in about 50% and 25% of them, respectively.

It appears from the ISNAR report based on the view of its country officers that there have been broad improvements in the major institutions in about half of the NARS that ISNAR has worked with since 1981. Although this method of assessment may be flawed because it is based on ISNAR's own country officers' opinions, we feel that their data tally with our own impressions from country visits and with the responses to the questionnaires sent to NARS (Appendix IV). There have been successes and setbacks -- all serving as lessons to ISNAR. For example, in Kenya, since 1981 ISNAR has helped to build a case for putting most of the agricultural research into a semi-autonomous institution (KARI), but KARI took eight years to get on its feet. The proposal was set back several times by local political and administrative problems, but patience paid off in the end.

In Tanzania, ISNAR assisted the Ministry for Agriculture, Livestock Development and Cooperatives to develop a national agricultural and livestock master-plan, without having first done a diagnostic review. It therefore lacked the deep understanding of the system it needed to underpin its collaboration with the NARS. Other problems in Tanzania included an unrealistic deadline (not set by
ISNAR) for preparation of the plan, and a proliferation of donor agencies, each with its own interests and requirements. We applaud ISNAR for helping complete the plan on schedule but recommend that such situations be avoided in future.

In Indonesia, ISNAR assisted with a review of the system in 1981, of which more than half of the recommendations have been implemented to date. We were informed that ISNAR had also assisted in 11 reviews of different research programs in Indonesia. If, as appears, the collaboration in Indonesia has been effective and efficient, we wonder why the involvement of ISNAR has stretched out over so many reviews. The Indonesian NARS (AARD) should have been able to carry out the later ones on its own.

In Sri Lanka, ISNAR successfully introduced program budgeting and a Management Information System (MIS). The Panel's visitors to that country noted that, for a number of institutions under the Council for Agricultural Research Policy, the MIS has already enabled research scheduling to improve.

These examples illustrate the importance and complexity of the issues of NARS's self-reliance and sustainability that challenge ISNAR's efforts to strengthen them. They show that ISNAR's advisory service is needed to help both newly interested NARS and the ones ISNAR has helped in the past.

6.3. Constraints to Achievements and Impact

How the two actors in this collaborative scene, ISNAR and NARS, relate to each other depends on fluctuations in their respective environments, often beyond the control of either of them, and this can greatly reduce the overall performance of the partnership.

6.3.1. Domestic Environment and Internal Problems of NARS

The developing countries in which NARS exist are characterized by complex and often changing governmental structures and by basic economic poverty. Political instability and poor public administration add to the problems, making it more difficult for ISNAR to have a meaningful, productive, and sustained partnership with the NARS, which also suffer from limited resources, rapid turnover of indigenous leaders, and a lack of political will to invest in research. The private sector, where and when it is healthy, typically has little contact with the publicly funded research sector.

6.3.2. External Influences on NARS

Most developing-country clients or potential clients of ISNAR are highly dependent on bilateral and multilateral support to survive. So are their NARS. The financial situation is getting worse, especially for agricultural research. For the past five years, the value of the hard-currency-earning agricultural commodities produced by these countries has declined on the international market. As governments have to
deal with several donors, each with its own interests and set of rules ("donors' whimsicality"), the interest of the NARS is often forgotten.

6.3.3. External and Internal Problems of ISNAR and Their Consequences

ISNAR, based in a developed country, thousands of kilometers away from its partners, has to share a static pot of donor funds with a growing number of international sister institutions of the CGIAR. As a consequence, despite doubling in size in the last five years, it is understaffed and underfinanced in relation to the scope and the importance of its mandate. Budgetary constraints lead ISNAR to rely on country visits that are too brief to fulfill its goals and meet the expectations of countries that have requested in-depth contributions. Moreover, for the same budgetary reasons, the institute relies heavily on special project funding over which it has only limited control. These circumstances constrain the number of countries in which ISNAR can work, as well as the intensity of its collaborations.

6.4. Assessment and Recommendations

6.4.1. Assessment of Advisory Service Program

We have found that, through its Advisory Service Program, ISNAR is considered to be an independent and honest broker, and its country officers are few in number but knowledgeable. This assessment is supported by one of the comments from NARS leaders in response to our questionnaire -- ISNAR's strengths include, "a vast store of firsthand experience in the working of NARS in developing countries." To solve its personnel shortage, ISNAR often uses consultants, whose quality varies. Nevertheless, the net performance of the advisory work has been effective and much appreciated in many NARS. ISNAR has had a significant catalytic effect. Without engaging directly in fund raising, its work has helped motivate and trigger contributions from various bilateral and multilateral donor organizations in support of NARS projects. Moreover, ISNAR itself has learned from its advisory exercises. It has developed a better understanding of NARS's problems and environments and gained a better appreciation of the time frame within which its work must be conducted.

Much room for improvement remains. There is a need to promote an institutional approach to advisory services. During our field visits, we noted that country officers differed in their approach to strengthening NARS. Some appeared to control most, if not all, of ISNAR's contact with an individual country. Others seemed more open to using the specialized skills of their colleagues in addressing key constraints. A related observation was that the more-experienced advisers seemed more comprehensive in their approach to a NARS, while less-experienced country officers, who are more narrowly focused, tended to direct ISNAR's input toward their own professional strengths. As NARS leaders have stated in questionnaire responses concerning weaknesses of ISNAR, "concepts sound abstract and need more practical demonstration," and, "sometimes ISNAR Staff have preconceived ideas which are difficult to overcome."
These differences in approach suggest that ISNAR should use, as far as possible, an institutional rather than an individual approach in its provision of advisory services. There must be a minimum level of oversight in ISNAR’s work with specific countries. More narrowly focused, less-experienced country officers need guidance and backstopping by seasoned advisers who can provide a more comprehensive view. Also, by following such an approach, ISNAR would enhance its "institutional memory" of specific countries, in case a country officer leaves ISNAR’s employment.

The management tools ISNAR offers need to be adapted to different target groups to help NARS become more efficient. We believe that a special effort is needed to convert the findings of research into consumable products for the target groups in the NARS. In ISNAR’s work with NARS, the attention devoted to, and the roles taken by, the universities/schools of agriculture vary widely. Allowing for differences in the structures and NARS-university interfaces in the client countries, ISNAR should recognize the universities as an important resource for strengthening research systems. Accordingly, ISNAR should devote adequate attention to this segment while suggesting measures to strengthen NARS. The lack of outposted staff may have inhibited the development of closer partnerships with some NARS. ISNAR should experiment with the outposting of some staff to CGIAR ecoregional centers. Also, in some cases, ISNAR has been slow to develop effective working relations with other national, regional, and international institutions. To avoid being set back by unexpected changes of government regimes and policies, ISNAR needs to keep better informed about client politics and political prospects. Finally, it should be prepared to advise NARS at different stages of development.

Recommendation 6.1.

ISNAR should promote an institutional approach, as distinct from an individual approach, to the measures required to strengthen the NARS that seek its advisory services; in this regard, more attention should be given to synthesizing ISNAR's country experiences.

Recommendation 6.2.

ISNAR should more systematically address the important role of universities and faculties of agriculture in developing-country NARS.
CHAPTER 7 - RESEARCH

7.1. Introduction: The Development of ISNAR’s Research

The last EPR recommended that ISNAR should strive to become a center of excellence in agricultural research management, with all ISNAR staff contributing to the three functional activities (advisory service, research and training); that there should be research on ways of setting priorities and on the organization and management of research; and that all professional staff should be encouraged to meet accepted professional standards, including some publications in refereed journals.

At the time of that review there was only a small group of economists beginning research at ISNAR, gathering data on NARS, and interested in research funding and policy, but not, at that time, in the development of management tools. Through the diagnostic work in NARS, ISNAR began to identify constraints from 1982. There was a systems approach, the main constraints being seen to be in the areas of policy, organization, and management. By 1986 the 12 critical factors were formulated and a research program began to be organized on a number of them. This was made possible largely because of the Rockefeller Social Sciences Program for the IARCs, through which ISNAR received five Research Fellows, some of whom then became Research Officers. The development of a data base on NARS attracted social scientists to come and work at ISNAR on sabbaticals. The overwhelming majority of the social scientists who came to ISNAR as staff, fellows, or sabbaticals were Americans, or US-trained.

It was in ISNAR's 1987 Strategy paper that the idea of ISNAR becoming a "research-based service" was first formulated. This aim was supported by all the professional staff; but how was it interpreted? What was meant by "Center of Excellence"? The last EPR recommendation on that, linked as it was with the injunction on professional standards and refereed publications, seems to have suggested "Academic Excellence." We must therefore ask: who are the intended clients of ISNAR's research? Policymakers in developing countries -- NARS -- donors -- academia -- or ISNAR's advisory and training staff? The latter, who work directly with the NARS, want tools, not papers; researchers say that tools will come, but must be based on sound research. Examples where there is a marked divergence of opinion in ISNAR itself are 1) the Indicator Series -- from our findings, these data are not interesting to NARS but are to some donors and other centers in the CGIAR system; researchers say they are the necessary basis for research on policy; advisors say they only interest academics. 2) Methods for setting priorities -- many countries want and are only able to use very simple methods: why should ISNAR do research on sophisticated methods? But countries develop capabilities and will graduate to more sophisticated approaches -- or will they? In the more advanced NARS of Asia, political factors may overwhelm other considerations. Interestingly, sophisticated methods have found little favor in developed-country agricultural research systems despite declining budgets and the need to make critical decisions on priorities and restructuring, although some of these systems have explored such methods in depth.
7.2. ISNAR’s Comparative Advantage in Research

ISNAR is a unique repository of knowledge about NARS. There are many other organizations that deal with NARS, but none with anything like the accumulated knowledge and experience gathered by ISNAR, with its highly dedicated staff serving NARS. This knowledge is obviously a key and indeed the starting point for system improvement through problem-oriented research and development programs.

Further, ISNAR’s research staff have established links with academic agricultural economists, especially on the methodology of setting priorities, for which there is an extensive network, and ISNAR appreciates that there needs to be a corresponding effort to tap knowledge on management.

ISNAR’s knowledge base is therefore composed of 1) the NARS experience of its senior staff; 2) the additional knowledge of NARS obtained by ISNAR in the course of its work with NARS; 3) specific data gathered on NARS, the need for which was recognized on the basis of the foregoing; 4) the products of ISNAR’s own research; 5) academic input from agricultural economists and socioeconomists. This is to be extended to 6) academic input from management studies.

This makes for a formidable combination of knowledge and skills. One significant element, however, is missing: knowledge of developed-country NARS. In raising this issue with ISNAR staff, it was evident that they have little knowledge of those NARS. Of course, the human, financial, and physical resources and their cultural background are very different; nevertheless, managers of agricultural research in developing countries have more in common with those actually managing agricultural research in developed countries than with academics. Many of the problems they face are similar in principle, e.g., static or declining budgets; incomprehending ministries and civil servants; excessive bureaucracy unsuitable for research organizations; the need to retrain staff, to restructure institutes, and to make significant shifts in priorities -- all of which have required and are requiring major changes in the policy, structure, and management of the research organization itself. Their managers may have written no papers but they have a store of experiential knowledge which should be tapped.

7.3. Organizing the Research Effort

The subheading might be, "Why Working Groups didn't work." In ISNAR’s flat structure, the organizational vehicles for programs (engaging concerns or clusters of concerns that the Institute has identified as critical factors) are supposed to be provided by Working Groups. The latter, cutting across both the geographic and the upstream-downstream dimensions of the Institute’s work, are supposed, within their program area, to engage everything from research to training. The effectiveness of Working Groups, however, has been particularly critical to the intended conduct of research. In part, this is because, when ISNAR began its research expansion, research was conceived primarily as an interdisciplinary group activity. For it to
develop as such, however, groups needed to enlist the efforts and interests of their members in producing joint products.

Few working groups have been endowed with either the leadership or the incentives to achieve this result on a sustained basis. The nominal allocation of members' time to Working Group activities has been very thin, leaders have had no management responsibility -- including the personnel assessments of their Working Group colleagues -- and most groups have had no separate budgets. Mainly it is only when groups have had special project funding have their leaders succeeded in keeping their members highly motivated to pursue collegial work. Research entirely dependent on core funding has been fragmented because of the limited, part-time nature of the staff contribution.

7.4. Sequencing and Allocating the Research Effort

One would expect ISNAR, as a specialist in priority setting, to have set its own research priorities systematically. This has been the intention. Indeed, the Medium-Term Plan (MTP) for 1988-92 projected an allocation closely aligned with six of the Strategy's 12 critical factors that had been designated priority areas in 1987. In addition, more than a quarter of project research outlays were reserved for the development of a data base on NARS and for special projects. The MTP projection for major-project resource allocations across the 12 critical factors is in the first column of Table 7.1.

The second column of the table shows actual allocations to the 15 major projects for the first three years of the plan period. The third column shows the total staff effort allocated to the critical factors, with some of the factors regrouped as they were in practice. There is some mismatch, which is not terribly surprising, but it does raise some concerns about the interplay between special project and core funding. It may reflect the fact that any research program has a particularized history and that some projects start before others. Some projects are built pivotally around people. In such cases, little happens until the right ones are recruited, and, when they are, they tend (and, within limits, should be allowed) to run ahead.

Moreover, the shape of research programs obviously can be affected by special funding, although there were resources allocated from core to critical factors that did not benefit from special projects or concentrated core funding. Most of the bulges in the list of actual allocations during 1988-90 reflect substantial, albeit not overwhelming, special funding. The outside inputs have levered commitments of core budget. We do not see the discrepancies between intentions and actuals as necessarily representing management errors, but we wonder how ISNAR would view such distortions in the NARS they advise. It may be that the plan as well as its implementation needs updating, but the appearance is that several priority areas need more attention and that some of the "bulging" should be redistributed to them.
7.5. Research: Tentative Assessment

The Panel is particularly aware of the fallibility of the following. Nevertheless, we must attempt a running commentary on several dimensions of the research program.

Table 7.1. The Research Program Allocations across the Critical Factors

<table>
<thead>
<tr>
<th>High-priority areas</th>
<th>Planned: 1988-92(%)</th>
<th>Major Project Allocations 1988-90 (%)</th>
<th>Total Research Staff Time 1988-90(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Formulation of agricultural research policy: priority setting, resource allocation, and long-term planning</td>
<td>9</td>
<td>4</td>
<td>9.9</td>
</tr>
<tr>
<td>2. Structure and organization of NARS</td>
<td>9</td>
<td>15.9</td>
<td>12.7</td>
</tr>
<tr>
<td>3. Linkages between NARS, the technology-transfer system and users</td>
<td>9</td>
<td>46.3</td>
<td>26.7</td>
</tr>
<tr>
<td>4. Program formulation and program budgeting, information management (MIS)</td>
<td>12</td>
<td>6.7</td>
<td>5.4</td>
</tr>
<tr>
<td>5. Monitoring and evaluation</td>
<td>9</td>
<td>-</td>
<td>4.9</td>
</tr>
<tr>
<td>6. Human resources</td>
<td>9</td>
<td>0.4</td>
<td>7.1</td>
</tr>
</tbody>
</table>

Low-Priority Areas

<table>
<thead>
<tr>
<th>Low-Priority Areas</th>
<th>Planned: 1988-92(%)</th>
<th>Major Project Allocations 1988-90 (%)</th>
<th>Total Research Staff Time 1988-90(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Linkages between NARS and external sources of knowledge</td>
<td>3</td>
<td>-</td>
<td>2.8</td>
</tr>
<tr>
<td>2. Development and Management of physical resources</td>
<td>3</td>
<td>-</td>
<td>0.5</td>
</tr>
<tr>
<td>3. Acquisition and management of financial resources</td>
<td>3</td>
<td>-</td>
<td>0.4</td>
</tr>
<tr>
<td>4. Information management (see 4 above)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Linkages between NARS and policymakers</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Interactions between national development policy and agricultural research</td>
<td>3</td>
<td>9.5</td>
<td>20.3</td>
</tr>
<tr>
<td>NARS data base and special studies</td>
<td>27</td>
<td>18.2</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Sources: Column 1: Medium Term Plan (basically planned core expenditure). Column 2: Major projects (special project plus project-related core). Column 3: Table 5c, Thematic Development at ISNAR, p 77. (Core- and noncore-supported research).
7.5.1. Downstream Connections

The logic of a research program that feeds -- and feeds on -- services and training downstream is impeccable. In practice at ISNAR, however, the connections between research, on the one hand, and services and training, on the other, are uneven. There are elements of the research program (notably, the Indicator Series) that, for reasons discussed below, are not primarily targeted on direct delivery of services to NARS. There are cases (both the agricultural-research-policy and the linkages work offer examples) where the products of research thus far are aimed mainly at specialized professional audiences and have yet to be translated into forms more usable in individual NARS. But the translations are intended and in some cases under way. For the most part, however, the imperfect connections between upstream and downstream activities in ISNAR reflect the "two-cultures" problem discussed elsewhere in the report (Chapter 5.3.1).

The Panel understands -- indeed sympathizes with -- both sides of this issue. Nevertheless, the tendency toward cleavage is costly. It must be and remain a primary concern, not only of management, but of the whole staff, to achieve a better, and easier, more congenial interpretation of research/analytical and field/service/operational attitudes and values.

7.5.2. External Relations, Partnerships, Networking

The Institute's documentation speaks of research collaborations with NARS and, more generally, with counterparts in client countries. We sense, however, that there is more to be done toward institutionalizing such arrangements. A few individuals from the client countries are invited to The Hague on research fellowships or are engaged in field research, but cases of institution-to-institution collaboration are still rare. More generally, networking to the many components of the relevant research communities worldwide remains uneven, and this applies to an even more general trait of the research program: its degree of openness.

When researchers are insecure and/or preoccupied with establishing their professional or corporate identity, they tend to be defensive and inward-turned, and this has affected some of ISNAR's research behavior. On the other hand, other Institute projects have been distinguished by extraordinarily extensive and rich networking. Institute staff persons, acting as confident peers, have drawn large numbers of top-flight specialists and collaborating institutions into their work. This is a model that should be replicated. Hence, we are gratified to find that some recent staff papers on research policy go out of their way to guard against parochialism.

7.5.3. Selected Major Research Projects

It may be useful to comment briefly on a few of the research program's major projects.

- **The Agricultural Research Indicator Project.** This warrants some further remarks. ISNAR has used this first major research project, as it were, to signal
its arrival on the serious research scene by developing a data set (meant now to become an improving time series) essential for comparative quantitative analysis of developing countries' agricultural research resources. As noted, people have questioned the indicators' usefulness to NARS. Information such as the names, addresses, etc., of agricultural research organizations and their programs, which would be very useful to NARS who wish to establish networks, have not been included. Other sources for such data are either out of date (e.g., CARIS) or expensive and not readily available.

The direct value of the present data to NARS is very limited. Without further analysis, NARS managers cannot easily use these data to encourage more generous allocations from their political masters. The indicators are valued by some donors, but with concern for a broader audience, the indicators could be made more valuable to donors, IARCs, and ISNAR's research. Seen, not as a one-off, but as a continuing data base on NARS, their organizations and programs, it deserves continuing support from special project funding. However, its high projected cost over the next five years should be critically reexamined.

**On-Farm Client-Oriented Research (OFCOR) and Research-Technology Transfer Linkages (RTTL).** These two related linkage projects have had outside funding from the same donors, plus considerable core support. Their major (book) products are well done and certainly are accessible to the more sophisticated readers in all NARs, although some translating into country-specific terms remains to be done. Moreover, production of the books established, at least for the time being, an extensive network with outside authors and researchers. With one of the central players already having departed ISNAR and another going on half-time, however, future prospects for the translation of this knowledge into useful lessons and tools is somewhat unclear -- even though one senior staffer specializing in linkages remains. In a sense this is a natural hazard in a small organization; people may leave, on average, no more frequently than they do in big organizations, but individual losses can be more costly. This points to the hazards of building projects around individuals, especially mobile young researchers, rather than interdisciplinary teams that continue when individuals do leave. Where much has been invested, as in the linkage projects, care is needed to provide for appropriate follow-up activity, especially to ensure an enduring impact on cooperating NARS.

**Biotechnology and the Small-Country Study.** We bracket these because both projects are built even more heavily around one key in-house researcher. They prove that with a confident and able player in the in-house role, this formula can work -- with good networking. Both projects have had the benefit of relatively generous special funding and core support. The biotech project, based on a three-cornered relationship between a bilateral research agency, ISNAR, and the World Bank, has developed an exceptionally strong and extensive network, which promises to persist and keep ISNAR in the game as
the key player moves to the World Bank. The small-country project is also achieving a high measure of interaction with outside institutions and specialists.

Both projects are being conducted in intellectually imaginative ways. Both are of great interest to some or most NARS. There has been no question that the small-country one addresses an "ISNAR-type" subject. There has been some question as to whether biotechnology strays too far from familiar ground and gets ISNAR in over its head technically. We judge that the answer, given the conduct of the project, is no. The subject matter of the national agricultural research systems with whose management ISNAR is concerned changes and broadens. NARS demand inputs from ISNAR that are subject-matter-relevant. ISNAR, therefore, needs to be able to address the policy and management choices involved in agricultural biotechnological research just as it does in crop or animal disease research. It needs the same degree of technical literacy (not mastery) that it has in the older fields. In-house it is useful to have had a strong injection of such literacy to start with. A network of follow-up competence may be sustainable with lesser (perhaps non-full-time) internal input. But the literacy should be sustained.

7.5.4. Literature and Quality Control

At one time ISNAR was criticized for having achieved nearly a complete bureaucratic blockage to its printed output. That past has been massively surmounted; the familiar complaint now is too much output. This issue is addressed under information (Chapter 9). Here, as to research, the related question is that of quality control. Early in its encounter with ISNAR, the Panel feared it would find great unevenness in the written research product. Indeed, although we have not been able to canvass the full voluminous product, we do find unevenness. For one thing, too much purely descriptive material is masquerading as research, but this is partly a problem of labeling. However, some of the principal book products we have read -- monographs and collections of contributed chapters -- have been done well. The refereed journal articles are subject to their own quality control.

This leaves the vast amount of what, in the parlance of the house, is "gray literature." First, it is anything but gray. On the contrary, there is a kaleidoscope of multicolored and formatted series that look more ambitious and differentiated than they are. We think some rationalizing of the product is in order -- one set of genuine, in-house working papers (staff notes, or whatever) prepared and circulated for comment with minimal vetting, and then a series of more distilled staff papers intended for wide distribution. These deserve fairly serious in-house review and preferably (and more uniformly) some external peer review. The missing link in the process appears to be that of transforming these research products into practical tools, such as management guides and training materials, that are of direct relevance and use to NARS leaders and managers.

There is a second point to be made about the ephemeral literature: the real policy and thrust of the Institute on the written products of research should be openness. Conceptual researchers venture freely into the intellectual market place
and learn from the hard knocks they receive, becoming, in the process, better self controllers of quality.

7.5.5. Research Content

We have two suggestions, both of which would engage more of ISNAR's research effort in case studies of national (and/or subnational) research systems' experiences, especially successful experiences. Both of our suggestions could be implemented by people of varied disciplinary backgrounds, as they have a talent for probing complex interactions of technical and institutional factors. And both would lead ISNAR researchers outside the terrain bounded by ISNAR's own operating experience. Thus, these would be further steps away from parochialism.

For one thing, then, there is room for far more investigation of agricultural research management experience, issues, and techniques in developed countries. Moreover, as indicated earlier in the chapter, there is scope for going directly to practitioners in the confidence that, in a world of rapidly changing technology, much of what one finds may be pertinent to developing-country situations.

Similarly, there could be great value in ISNAR-conducted or -led case studies of agricultural research management experiences in the larger developing countries, which have been outside ISNAR's field of activity -- for example, Mexico, Brazil, Argentina, or the federal system (center, state, council, and agricultural universities) in India.

Recommendation 7.1.

ISNAR could appropriately direct some of its research effort to the study of the experiences of agricultural research management in other countries than those in which it has worked -- both selected developing countries and some of the larger and/or more technically sophisticated developing countries.

7.5.6. The Expertise Profile

If ISNAR really believes, as we do, that research, service, and training should interpenetrate, then research itself will need to maintain a balance between field types (working, for example, on case studies and diagnostic inputs) and analytical types clustered at headquarters. Indeed, this balance should not be allowed to disappear as the result of generational change. Young research-oriented recruits should include not only disciplinary Ph.D.s but also equally gifted young people with a bent toward multidisciplinary work in the field; they are harder to find.

Despite a considerable investment in research on organization and management, in addition to its research on policy, there is a sense within the institution (in the minds of some members of the Board, of the management, and of many of the staff) that we ourselves voiced at the beginning of the chapter: in the social sciences area, ISNAR has not developed lines into the so-called management
sciences that are as reliable and first-rate as those it has developed into economics. As just suggested, some of this weakness might be met by drawing, whether by consultancies or otherwise, on actual research management experience in developed countries. We suspect part of the gap could be closed by greater resort to some very strong management institutes in Asia. But, fundamentally, there is still a recruitment problem -- to hire (part-time and/or full-time) a small group of the right skills, competence, and enthusiasm, and then carve out enough time for them to construct and launch a research program.

Recommendation 7.2.

In determining its research priorities, ISNAR should give more weight to the research needed by the advisory service to provide appropriate management tools for NARS.
CHAPTER 8 - TRAINING PROGRAM

8.1. Introduction

ISNAR has a Training Unit with two professional staff, including the Coordinator, and one secretary who assists with the preparation of teaching aids and materials. Most professional staff at ISNAR carry out training activities which, during 1990, accounted for 22% of their time, the equivalent of an additional 6.8 person years of professional staff resources. In 1989-1990, training accounted for 21% of ISNAR's total expenditures.

The stated goal of ISNAR's Training Program is to help NARS leaders and scientists to develop their management and analytical capacities. This training is part of a broader institution-building strategy that is designed to increase the efficiency and effectiveness of NARS through enhanced capacity in research policy, organization, and management. At ISNAR, there are four basic types of training activities: (a) planning, organizing, and executing courses, workshops, and seminars for NARS personnel, (b) development of training materials, (c) in-house training of selected NARS managers, and (d) in-service training of ISNAR staff.

In the 1981-85 period, training activities consisted almost exclusively of global and regional conferences and seminars. During this period, the number of training events increased from four to 11 courses annually, with an increase from 78 to 301 participants during this period. Most workshops were on general research management aimed at senior-level NARS leaders. These courses served two purposes: first, to draw the attention of NARS leaders to the need for improved management, and second, to demonstrate the unique role that ISNAR could play in the process.

8.2. Training Activities 1986-90: Major Trends

During the 1986-90 period, the number of training events increased from 18 to 32 workshops/seminars, an increase of about 14% per year. About 3900 participants attended ISNAR training activities during this period. The average course or workshop involved 33 participants and lasted about four days.

ISNAR's Training Program was in transition during this period, moving from general training for NARS leaders to more specific courses for senior- and middle-level managers; also, these training activities were being held more frequently within regions and at the national level. As shown in Table 8.1. below, in 1986 about one-half of ISNAR's courses were classified as general training events, but by 1990 this proportion had declined to about one-third. Furthermore, this emphasis directly reflects the six critical factors given priority in ISNAR's 1987 Strategic Plan, plus information management (MIS) which has, in effect, become a seventh priority. The table illustrates the distribution of these training events across factor areas from 1986-90.
Table 8.1. Number of Training Events by Critical Factor (1986-90)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning and Priority Setting*</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>10</td>
<td>12</td>
<td>30</td>
</tr>
<tr>
<td>Structure and Organization*</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Linkages - Technology Transfer*</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Program Formulation and Budgeting*</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>11</td>
</tr>
<tr>
<td>Monitoring and Evaluation*</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Human Resource Management*</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>13</td>
</tr>
<tr>
<td>Policy Interactions</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Linkage with Policymakers</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Linkages - External Knowledge</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Financial Resource Management</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Information Management (MIS)</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>5</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>Physical Resource Management</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>General (3 or more factors)</td>
<td>10</td>
<td>10</td>
<td>13</td>
<td>8</td>
<td>11</td>
<td>52</td>
</tr>
</tbody>
</table>

Note: If a course emphasized two critical factors, it is recorded twice in this table, which accounts for the additional 18 events (135-117). Also, the priority critical factors are listed first and marked with an asterisk (*).
The regional distribution of training courses during this period was 35% in Africa, 20% in Asia, 18% in WANA, 10% in LAC, with the remaining 17% being classified as international or global courses. Gender data were collected on only about 18% of ISNAR's courses; for those courses where data are available, approximately 16% of the participants were women.

In addition to these group training activities, senior research leaders or managers visit ISNAR to acquire specific skills. The numbers of participants who undertake these "in-house," individualized programs range from 10-20 per year. Most stay from one to two weeks; however, a few undertake two- to three-month assignments. In 1989-90, the regional breakdown for these visiting managers was 15 participants from Africa, five from Asia, nine from LAC, and three from WANA. Only three, or slightly less than 10%, of these senior-level visiting managers were females.

As noted above, during the first five years, ISNAR workshops were largely experience-based and general. As R&D activities began to produce management techniques and tools for senior- and middle-level managers, more emphasis has been given to the development of training materials. The first training series of 16 modules concentrated on key aspects of human resource development and management. These materials were an outcome of a specially funded SADCC training project for the management of agricultural research. Other training manuals and materials are currently being developed for planning and priority setting and for management information systems. Developing and field testing these management tools and the corresponding training materials is a time-consuming process that requires an intensive team effort between management researchers, the outreach staff, and the training materials specialist.

In addition to these training activities for NARS personnel, ISNAR staff members have participated in in-service workshops and related training activities, either to improve their presentation and training skills, or to learn about and, in the process, help pilot-test the new training materials that are being developed by other working groups to transmit the new management tools. The Training Unit organizes or backstops these in-house training activities.

8.3. Assessment of ISNAR Training Activities

Based on the country visits by the EPR Panel, the Panel survey of NARS leaders, and the limited amount of course evaluation data collected by ISNAR staff, it seems reasonable to conclude that most ISNAR training activities are well received and there is a high demand for more skill development workshops. It is difficult to assess the impact of training activities accurately without systematic follow-up and evaluation. Because it is donor financed, there has been an external evaluation of ISNAR's SACCAR training project. A comprehensive evaluation of ISNAR's other training activities has not been done, but it is recommended. It should be noted that the external evaluation of the SACCAR training project raised questions about the
The rapid expansion in the number of training events over the past five years, with an average of 33 participants/event, plus the lack of field-tested training materials has had a negative impact on the quality of some training activities. Furthermore, systematic training procedures involving all components, like need assessment, planning, materials development (both print and audiovisual), and course/workshop evaluation, have been followed in only about 15% to 20% of the courses as recently as 1990 (primarily the SACCAR and Kenya special-training projects). While most trainers manage to get a list of participant names, they generally do not get complete addresses (for the ISNAR mailing list and subsequent follow-up activities, including impact evaluation) or basic demographic data (the reason why gender data were only available for 18% of ISNAR's training events).

The Training Unit has well-established procedures and is prepared to work with the professional staff to help them plan their training events, including materials preparation, and to provide them with standard course registration and evaluation forms for use by ISNAR trainees. However, since the Training Office has no authority to insist upon systematic procedures being followed and Senior Management only encourages their use, these procedures are generally ignored by the majority of senior staff. It appears that some professional staff see training as a numbers game. Consequently, without the commitment of Management and the cooperation of the professional staff, there is no way to systematically measure the quality of instruction being delivered, or its impact.

For ISNAR to achieve its goal of institution building by strengthening the management capacity of NARS, all professional staff should follow basic training procedures and meet certain minimum standards of quality, so that training programs will serve their intended purposes across all programs and regions. The Training Unit should be a full partner in ISNAR's training activities. Therefore, it should have the authority and resources to insure that minimum quality standards are achieved.
Recommendation 8.1.

The Training Unit should be given the responsibility and authority to ensure that basic procedures for training are followed for all ISNAR training events, and that procedures for monitoring and evaluation of training events are established.

8.4.2. Achieving a Multiplier Effect

Since ISNAR has about reached its maximum level of direct training by its senior staff and the demand for ISNAR training will continue to grow as new management tools become available, the Institute must use intermediaries to achieve a multiplier effect. There are several alternative approaches currently being pursued on an ad hoc basis by the professional staff in different regions. These different approaches merit further exploration and systematic review by Management. The basic approaches are summarized here.

The first is cooperation with Management or Management Development Institutes (MDIs) or the management departments of universities. ISNAR is currently pursuing this strategy in the SADCC region. These MDIs normally concentrate on general management training, but, through a partnership arrangement including backstopping, these institutes, equipped with materials and train-the-trainer workshops, could become an important and effective mechanism for training middle-level NARS managers in specific management skills. However, as ISNAR has learned through its SADCC experience, staff stability is a serious problem at some MDIs, which can negatively affect program continuity and quality.

A second approach is the use of selected management trainers. For example in the KARI training project in Kenya, effective trainers are being identified who understand the ISNAR approach and who are knowledgeable about the concepts, skills, and training materials being used. As ISNAR continues its work in each region, more of these individuals will be identified and they can be cultivated as a pool of future trainers.

This second approach would require that ISNAR play some type of coordinating role in locating financial support, especially for a series of national training programs (e.g., KARI in Kenya), where it could draw on local trainers in the region to deliver most of the training, but following standard ISNAR procedures. This approach would enable ISNAR to keep a visible presence in these special training activities, but it would also achieve an important multiplier effect and in the process develop a cadre of competent management trainers in the region.

A variation on this second approach would be for ISNAR to work through regional organizations such as IICA (and the FAO) as they have done in the LAC region, or through the emerging system of ecoregional IARCs where ISNAR might establish a regional outreach office from which training and related activities could be organized. In the last case, workshops and training events should be hosted by NARS or regional organizations wherever possible, to enhance the capacity building element
of the programs. ISNAR’s experience in the LAC region is an excellent example of these partnership arrangements. Also, this latter approach would help improve the coordination of ISNAR’s training program with other CGIAR training activities in the ecoregion; the Panel’s country visits did uncover cases of overlap which should be addressed.

A third alternative would be to use a "lead-country NARS" in a given subregion as a demonstration and training site for management personnel from neighboring NARS. On-the-job, hands-on training is important and is sometimes more appropriate for learning specific management skills, such as operating a management information system (MIS) such as INFORM. ISNAR cannot provide one-on-one training, but a lead-country NARS, which has received intensive ISNAR support over several years, might be willing, even delighted, to provide these individualized training services.

The basic concept underlying the goal of achieving a multiplier effect is that ISNAR should concentrate on training materials development (i.e., stand-alone training packages, including an instructor’s guide, a training manual or a series of training modules, audiovisual materials, and registration and evaluation forms). Also, regional coordinators and country officers should continue to identify and maintain a list of potential trainers who emerge from national or regional training events. These individuals could be brought to ISNAR headquarters for train-the-trainer courses, which would include training techniques and in-depth training in new management tools and materials.

Since ISNAR’s resources will never grow fast enough to meet the growing demand for management training, particularly at the senior- and middle-management levels, the institute needs to modify its training strategy over the next five years to emphasize more wholesaling instead of increasing the number of courses it delivers (or retails) using its own staff. In the future, most direct retailing of courses should be primarily to field-test training materials, particularly using its lead-country NARS.

Recommendation 8.2.

ISNAR should actively pursue a training strategy that emphasizes a multiplier effect by developing training packages that can be used by intermediary institutions, or used in a region through a network of competent trainers who can begin to provide much of the direct training services to middle-level managers in NARS.

8.5. Languages

Training materials that are not location-specific (such as MIS tools like INFORM) should be translated at least into Spanish and French (and possibly Arabic for some materials) once they have been field-tested and finalized as a full training package. At the present time the service officers working in Latin America and
francophone Africa have to translate a minimum set of materials into the appropriate language and then do the training themselves to fill in the gaps through oral presentation. This is an inefficient use of a professional officer’s time, both for translating training materials and because they must do the direct training themselves.

A major cost of management training is the R&D work that is necessary to develop the management tools and techniques, and then to develop and pilot/field-test the accompanying training materials. Translating these materials into at least two additional languages is a small additional cost that would greatly increase the access that NARS leaders and managers in Latin America and francophone countries have to these management training materials and skills. If ISNAR cannot cover these translation costs from core funds, it should seek special project funding from external donors or work out a partnership arrangement with appropriate regional organizations.

8.6. Modifying Existing Training Materials to Accelerate the R&D and Materials Development Process

ISNAR staff includes few individuals with formal management training. Consequently, many staff are unfamiliar with the concepts, terminology, and methodology of management instruction and, when they give courses, improvise management concepts from their own experience. As training moves more into the wholesaling phase, both the content of training materials and the methodology that should be used in its implementation will need further improvement. To assist in this, individuals who specialize in teaching management concepts and tools should be used as limited-term consultants both for in-service training of ISNAR Staff and for advice on the preparation of the materials.

8.7. Expanding and Organizing a Visiting Managers’ Program

As noted earlier, ISNAR hosts 10-20 visiting NARS managers annually who come to learn about specific new management tools and to get acquainted with or updated on ISNAR programs. Generally these visitors come for one to two weeks, but in a few cases they actually get involved in a program activity and stay for two to three months.

With respect to the short-term visitors’ program, this mechanism is an excellent means of building a strong collaborative relationship with key NARS leaders and managers. They learn what resources are available at ISNAR, and the country officer establishes an important collegial relationship with the leader or manager. In terms of pursuing a lead-country strategy in each subregion, ISNAR should consider bringing a key leader/manager to The Hague each year, rotating the visits among key members of the management team in each NARS.

The problem with such visits is that they are very labor intensive for the headquarters staff because they individually brief each visitor for one to four hours.
We suggest that ISNAR consider making such a program an annual or semi-annual event, focusing on particular language or regional groupings whose members would come to ISNAR not only to learn about new programs and management tools but also to exchange ideas with other NARS leaders. As indicated, it would economize staff time by briefing managers in groups. This scheme might be attractive for special funding.

8.8. The Role and Resources of the Training Unit

Training is a primary output of ISNAR and its importance will continue to grow as management tools become available and as increasing numbers of middle-level managers need to be trained. Therefore, the Training Unit must have the responsibility, authority, and resources commensurate with its role in the institution.

To carry out these responsibilities, as outlined in the introduction, the resources of the Training Unit will need to expand, especially as the output from the thematic programs increases. While training must remain an integral part of the agenda of the thematic programs, the Training Unit should include professional training materials specialists who, with their knowledge of the training process, can develop a more uniform output of corporate training materials. To do so, the Unit will need strong backing and support from Management. Without a strong Training Unit, these central outreach activities will continue to be carried out in an ad hoc manner, without adequate quality control, and the wholesaling of ISNAR training materials will, at best, only be partially realized.

8.9. Conclusion

Management training is a central, essential element in ISNAR’s strategy to strengthen NARS. Training is most effective when it is a part of a longer-term strategy of institution building, in which advisory services and training are closely intertwined. The strategy must move from general doctrine to hands-on skill development, and from NARS leaders to senior- and middle-level managers. ISNAR can only achieve these objectives by pursuing a strategy which includes a multiplier effect, including an increased emphasis on the development of training materials and the systematic collaboration with trainers, training institutes, and/or lead-country NARS in each region.
CHAPTER 9 - INFORMATION

9.1. Introduction

Information management at ISNAR can be generally categorized as input (primarily the specialized function of the library and documentation center), throughput or information processing (an important, but not exclusive, function of computing services), and output. Since we consider that the most important information issues are associated with the output side, publications are considered first.

9.2. Publications

9.2.1. Introduction

The Publications Unit currently consists of two professional editors, one of whom serves as unit head, one assistant who works with the production and distribution of publications, a secretary, and a graphic designer who is shared part-time with the Training Unit. Previously the Unit had an additional editor and French editing capacity. However, with the departure and replacement of staff in this unit, this additional position has not been filled and the overflow is being handled by freelance editors. In 1990, the direct cost of publications, excluding salaries, consumed about 4% of ISNAR's core budget and special project funds; the comparable figure for 1989 was nearly 5%.

The overall objective of ISNAR's Publication Program, based on its Publications Policy statement of March 1986, is "to disseminate practical information about the management of agricultural research to research managers; and to contribute to the development of knowledge about the management of agricultural research." Therefore, the primary audience for ISNAR publications is NARS managers; other audiences are the international development and scientific communities, particularly those organizations and individuals interested in agricultural research management.

For a small organization, ISNAR has a very wide range of publications, even allowing for the fact that knowledge and information about research management needs to be expressed in different forms. There are ten categories of formal publications and several other categories. These various types of publications are listed below in Table 9.1, including the number published or produced between 1986-90.
Table 9.1. Type and Number of ISNAR Publications and Documents (1986-90)

<table>
<thead>
<tr>
<th>Formal Publications (161)</th>
<th>Informal Publications (94)</th>
<th>Other Publications/Papers (432)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Country reports (32)</td>
<td>1) Staff Notes (94 since mid-1988)</td>
<td></td>
</tr>
<tr>
<td>2) Research management series (0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3) Working paper series (36)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4) Special project documents (32)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5) Training series (1 series with 16 modules)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6) Conference reports (11)</td>
<td>1) Journal articles (19)</td>
<td></td>
</tr>
<tr>
<td>7) Reprints of journal articles (n.a.)</td>
<td>2) Books (3)</td>
<td></td>
</tr>
<tr>
<td>8) Administrative documents (7)</td>
<td>3) Conference presentations and misc. papers (410)</td>
<td></td>
</tr>
<tr>
<td>9) Public affairs (documents = 15)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10) Newsletter (12 issues)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total ISNAR Publications and Documents = 687

Given that the central objective of ISNAR's publications is to provide practical information about the management of agricultural research to research managers and, second, to contribute to the development of knowledge about research management (Publications Policy, p.1), it is questionable how well ISNAR publications are currently serving these two goals. Most ISNAR publications are lengthy, descriptive reports which, based on our discussions in the field, seem inappropriate for NARS leaders and managers.

According to ISNAR's Publications Policy (p.2) "The Research Management Series is a major way in which ISNAR contributes to the development of knowledge about agricultural research management." Yet this publication series, which claims some level of internal and external review, is totally inactive. If the assumption is that "staff notes" should lead to a "working paper" and, eventually, graduate to the "research management paper" series, then something appears to be wrong. In fact, the most "user-friendly" publications produced recently, that are formatted in a style that is more readily accessible to NARS leaders and managers, are the special project documents, such as the INFORM series, The Technology Triangle, and Beyond Mendel's Garden, but they were not part of the research management series.

9.2.2. Issues

9.2.2.1. The Multiplicity of ISNAR Publications

At this time, ISNAR's professional staff are turning out large volumes of descriptive output, but this is not being synthesized into corporate products about specific management problems, including alternative means of solving these problems. Perhaps more of this type of output will be forthcoming as ISNAR addresses key organizational issues and considers the relative balance of its efforts between research
and development within the thematic programs. In the meantime, however, the Publications Committee needs to review the number and type of ISNAR publications and then formulate a new policy to specify the type of publications needed for each target group, and then establish the basic criteria, format, and procedures that should be followed. This should be considered an institutional goal, and the professional reward system within ISNAR should provide greater recognition for final or near-final products, especially downstream management information, tools, and training materials, that are useful to NARS (see Chapter 10).

Recommendation 9.1.

ISNAR should review and rationalize its Publications Policy, so that its publications are appropriate for ISNAR's goals, especially the goal of serving the needs of its primary clients: NARS leaders and managers.

9.2.2.2. Quality

The last EPR review recommended that ISNAR publish more. This was taken seriously by the staff and management, perhaps too seriously. The response has been a large output (see Table 9.1), but with the resulting quality being very mixed. In addition, the current Publications Policy is out of date and not being followed. The prevailing norm being pursued by some staff appears to be that quantity has a higher priority than quality. As one former ISNAR senior staff member was reported to say, "No one reads this stuff anyway, why bother editing it carefully? Just get it out." This attitude may help explain the comment of one donor representative who said, "It seems like every week or so the ISNAR truck drops off another load."

While these statements may have been made for effect, they do highlight a serious problem. A recent publications consultant put it correctly and succinctly: "If ISNAR's publications are read, they should meet the tests of clarity, conciseness, completeness, and consistency. In research works, they must also meet international conventions and standards; in NARS-oriented guides they should match the knowledge and language fluency of the intended readers" (I. Montagnes, "Publications at ISNAR", April, 1991). While recognizing that ISNAR needs to document its work, especially in advisory services, and that this grey literature is a very useful part of the Institute's corporate memory, we believe that this purpose would be better served by clear, concise reports.

9.2.2.3. Evaluation of ISNAR's Publications

As suggested above, the volume and multiplicity of ISNAR's published output, as perceived by NARS, requires an objective review and consideration. The consultant who reviewed ISNAR's Publications Policies and Procedures in April 1991 recommended that a systematic evaluation be made to determine what types of materials ISNAR's primary clients find most useful. From our survey of NARS leaders, it is clear that the majority are receiving ISNAR publications across most priority areas. At the same time, publications were generally the least preferred type of service or activity requested by NARS leaders. This preference may reflect the
quality problem discussed above, but what do NARS leaders and managers want and need? Since ISNAR cannot work intensively in most countries, publications will have to be a primary channel of disseminating research management tools and information to many of its clients. Also, since ISNAR is spending 4% to 5% of its budget on just direct printing and distribution costs, this problem has resource implications.

The "in-house" view is that such an evaluation is needed but that it can be undertaken through some type of reader survey using Institute expertise. There is no doubt that ISNAR does have this type of expertise, but like so many other tasks, will the staff have sufficient time to carefully plan, execute, analyze, and produce the type of evaluation that appears to be needed? Given the backlog of work that is building up in the publications unit and the heavy work load of other staff who would be qualified to undertake such an evaluation, ISNAR should probably secure some outside expertise to help carry out such an evaluation, particularly at the design and analysis phases.

9.2.2.4. Language

At present, 86% of ISNAR's published output is in English, with only 7.4% in French and 4.4% in Spanish. This situation raises serious questions about how well ISNAR is serving some of its primary clients. While some NARS leaders in non-English speaking countries may be able to communicate in English, as ISNAR develops tools and methods for senior- and middle-level managers, language will become an increasingly important constraint.

Translating and printing ISNAR publications in several languages has obvious cost implications, given ISNAR's limited resources. However, if the Institute can produce fewer high-quality final products, then there should be some potential tradeoffs that can be used to increase the output of final products in several languages. At the very least, all major ISNAR publications should have summaries, like IFPRI's "policy briefs," in English, French, and Spanish, so that NARS leaders can quickly determine if an ISNAR publication has detailed information or tools that merit further pursuit. These "management briefs," such as the four-page "Biotechnology in Agriculture: A Brief Summary," could also be published separately in several languages and distributed to a broad audience. An in-house committee of the regional outreach staff should be established to review all final products to decide which of them merit publication in additional languages.

9.2.2.5. The Publications Committee

Given the institute's view of the need for published output, the volume of flow that has resulted, and the Advisory Committee on Publications' lack of authority, the Committee has been impotent to control quality. The problem is further complicated by staff travel schedules, which make it difficult even to arrange committee meetings. It was pointed out to the Panel that the Advisory Committee on Publications has delegated some internal quality control to the Working Groups; however, this is like assigning the fox to guard the henhouse. Furthermore, some
staff members view the process of reviewing and criticizing a manuscript as a chore and do not take it seriously. In more than one instance, when the previous Publication Unit Leader raised serious questions about the quality of specific manuscripts, he was over-ruled by senior management and told to "get it out."

If ISNAR's publications are to meet Montagnes' 4C's test, as mentioned earlier, then the institute must reinstate a strong, in-house Publications Committee (the present committee is listed in Table 5.1), responsible for a rigorous review process that is appropriate for each particular publication and its presumed role either (a) in contributing to the growing body of knowledge in this emerging field of study, (b) in communicating information about management tools and methods to NARS leaders, or (c) in producing training materials that can transmit these skills and knowledge to NARS managers. By instituting and following appropriate quality-control procedures, the Publications Unit can be far more cost-efficient and effective in producing a fewer number of high-quality products that will be useful to and read by ISNAR's clients.

In accord with the development of middle-level management at ISNAR, the authority and function of its Publications Committee should be reconsidered. The people appointed to the Publications Committee should have the interest and disposition to take their responsibilities seriously as it will be difficult to restore discipline in an organization where publication standards have been slack.

Recommendation 9.2.

A new Publications Committee should be established with the authority to control quality and enforce ISNAR's Publications Policies and Procedures.

9.2.2.6. Publications Unit and Staff

In spite of the many issues raised about ISNAR's publications, in our view the fault does not rest in the Publications Unit itself. The Publications Unit staff are first-class professionals who are committed to high-quality and useful publications. Their talents extend far beyond mere editing, although that is how they have been used. They are overworked, yet underutilized in terms of fulfilling ISNAR's mandate. This Unit deserves more respect and authority than has been given to it in the past. The new Unit Leader is a committed professional who recognizes the problems that exist and knows what steps are needed to correct them. To do so, the Unit Leader needs appropriate management authority and resources, including a budget.

The number and type of professional and support staff needed in this unit must reflect ISNAR's new Publication Policies, especially with respect to issues of quality, volume, and types of output, as well as languages of publication. Whether it is more efficient for ISNAR to handle more of the routine editing and translation tasks internally or to subcontract them out to freelance people is an administrative decision. However these matters are decided, the one point that needs to be emphasized is that the Publications Unit plays a critical role in helping package research management knowledge, information, and tools in a manner that makes this
material accessible and useful to NARS leaders and managers. As such, they must be considered full partners in the ISNAR enterprise and be afforded the role and status that they deserve in the organization.

**Recommendation 9.3.**

The Head of the Publications Unit should be given managerial authority over its operations, including its own budget.

9.2.2.7. Sale of Publications and Use of Commercial Publishers

The true test of the value of ISNAR’s publications is to assess their value in the marketplace. While publications should continue to be provided free of charge to ISNAR’s priority clients, the sale of ISNAR publications to readers in the industrially developed countries would be one way to reduce costs and, perhaps, generate additional income. This issue should be reconsidered by ISNAR Management, along with its impact on different client groups. If it is possible to sell publications on a partial cost-recovery basis to developed-country readers, without creating an excessive administrative burden on the Publications Unit (i.e., to sell publications through retail outlets like Winrock’s Agri-book Store), then such a policy would probably be useful as a cost-cutting measure.

In terms of using commercial publishers, the primary issue should be one of accessibility to target audiences. In certain cases, ISNAR publishes books in joint arrangements with commercial publishers; however, most publications are not sold. The decision to use a commercial publisher must be decided on a case-by-case basis, depending on the target groups to be reached. Secondary considerations would be the relative cost advantage of using a commercial publisher and whether they have a worldwide distribution network.

9.2.2.8. Journal of Agricultural Research Management

The external consultant's report mentioned earlier suggested that ISNAR consider starting a Journal of Agricultural Research Management as a vehicle for promoting research and scientific exchange in this emerging field. The Panel does not consider this idea to be an effective use of ISNAR's resources. The Journal of Agricultural Administration was discontinued in 1988 due to increasing costs and declining subscriptions, despite the fact that this journal served the broad community of researchers and administrators who are interested in the management of agricultural institutions, including NARS. We believe that a more specialized journal on agricultural research management would have to be heavily subsidized and would divert resources away from ISNAR's primary goals.

9.3. Computing Services

In February 1991, computing services at ISNAR were reviewed by an external consultant. The summary of this consultant’s report accurately describes the
progress made in improving computing services at ISNAR over the past five years. The next three paragraphs are drawn largely from that summary but presented with minor updating of information.

In ISNAR, until recently, the provision of information concerning computers was regarded as a support function, and services offered at clerical/technical levels have been managed by the Administrative Unit on a demand basis, with cyclical expenditure and very little interaction between support and program functions. In 1990 management decided to substitute the technically obsolete WANG system with Industry Standard Architecture (ISA) PCs and a DEC VAX 3800 central resource as a hub for the PC network and a platform for interinstitutional communications.

In the absence of a clear organizational policy for computerization, PCs spread throughout ISNAR in an uncoordinated way. Lack of standards for system development and uncontrolled proliferation of PC software of off-the-shelf application packages resulted in individual tasks being computerized without regard to overall institutional needs. Clearly, the organization was out of touch with developments in the fast-growing area of information technology. The decision, therefore, to move to industry-standard PCs, to redesign most of the software to meet user needs, and to share hardware and software resources via a Local Area Network (LAN) was appropriate and timely.

The decision to deploy a central resource, a large number of networked PCs (currently 70+ PCs increasing to about 85 90 PCs as the WANG equipment is phased out), and a communication system that will run on the VAX 3800 will necessitate the establishment of a Computer Services Center, where all the staff resources can be pooled to meet the expected high demand for services.

The ISNAR staff who are directly involved in computing services include a Research Associate, who currently serves as an "Information Management Specialist," two Network System Managers (one each for the WANG and VAX systems), a half-time Computer Training Specialist, and a full-time secretary/support person who coordinates computer support activities through a "help desk." With the exception of the Information Management Specialist, all computer support personnel report to the Administrative Officer.

Overall, computing services are providing all necessary support functions to the professional and administrative staff. The Information Management Specialist has a good informal working relationship with his colleagues in the Library and Publications Units. How computing services are organized within ISNAR is a management decision; however, there appears to be considerable merit in putting all computing services personnel into one unit, as suggested in the consultant's report, and then associating the three information units within a common Information Services Unit.
9.4. **Library and Documentation Center**

The Library and Documentation Center staff consists of one professional at the associate level and one support staff. Although the center has no budget, it has latitude to make "reasonable" acquisitions, generally in the range of US$50,000 - US$75,000/year. The Institute provides specialized documentation services to the professional staff in support of their research, advisory, and training activities. For example, when an ISNAR team plans to undertake a diagnostic review in a country, the Librarian will compile all relevant documents on the country, including the agricultural sector and its institutions, especially the agricultural research system. Likewise, the Librarian is alert to new publications for each critical factor area and brings these new publications to the attention of each Working Group Leader.

Overall, the Library and Documentation Center appears to be operating smoothly, but without any administrative control over its resources. The unit head expressed an interest in playing a modest program role and appeared to have time available to carry out some activities in this area. However, we think that while the Librarian might prepare information and provide headquarters training to NARS leaders and managers on up-to-date methods of accessing external knowledge and technical information through computerized systems, he should not be absent for extended periods participating in diagnostic reviews and similar activities.

9.5. **Future Activities in the Information Area at ISNAR**

We believe that there are strong arguments for consolidating the computer services, library, and publications activities at ISNAR into an Information Services Unit. The word "Services" emphasizes the central function this unit should provide within ISNAR. As an organization which advises NARS about information management, ISNAR itself should have the most up-to-date and appropriate technology. The present ISNAR staff in the computing, library, and publications areas have a large store of knowledge in their respective fields which ISNAR should put to good use internally. These ISNAR staff should be consulted by ISNAR program staff about terms of reference, choice of consultants, and other aspects of ISNAR's advisory service to NARS. However, we believe that extensive direct program involvement of these staff would divert them from their main function.

TAC is currently reviewing the issue of information management in the CGIAR, and a number of CGIAR intercenter meetings on this topic have taken place, or are planned. The issues being addressed are complex, but one suggestion that ISNAR could serve as the CGIAR's major "upstream" institute for global research on information management is obviously very relevant to this Review. We do not, however, feel sufficiently well informed about this topic to analyze the issue in detail or make a recommendation. As the TAC and intercenter debate on the matter proceeds, ISNAR should participate in the discussions but be mindful that an expanded role for ISNAR in information management would require additional resources.
CHAPTER 10 - THE MANAGEMENT OF HUMAN RESOURCES

10.1. Overview

The motivation, commitment, quality, and composition of ISNAR’s staff are critical if the Institute is to make a meaningful contribution to NARS. How people are managed at ISNAR will affect their productivity and the Institute’s capacity to make an impact. Efforts have been made recently to systematize personnel policies. Yet for several years the broad areas of human resource management, planning, and development have not been Institute priorities.

Morale, which the last EMR reported was high in 1986, has declined for a variety of reasons (including the unexpected change in the Institute’s leadership, the transition marked by a long interim arrangement, and external factors such as financial constraints and the delay in mounting this external review). It will be a challenge for the Director General, who handles human resource management of professional staff, and the Administrative Officer who handles this function for support staff, to reverse this trend. Senior professional staff will also have a significant role to play in achieving this organizational goal.

10.2. The Classification and Composition of Staff

In 1991 ISNAR is introducing a new classification system. This includes five grades for professional staff and three grades for support staff. The new classification will be more structured than the present somewhat informal system. One specific difference is that research/administrative assistants will be moved from the support to the professional category.

At the end of 1990 ISNAR had a staff of 92 -- 50 professional and 42 support -- all based in The Hague, except for five assigned to special projects overseas. The staff has nearly doubled since its 1986 level of 48 (29 professional and 19 support). Of the 50 professionals, 12 were associates in 1990 (against 3 out of 29 in 1986). Despite this growth, the average age of professional staff is still 46, as it was in 1986 (the average for support staff is 32).

Tenure of ISNAR staff is low -- 50% of professional staff have been with ISNAR for less than three years at the end of 1990 and 55% of support staff for less than two years. This is mainly because ISNAR has been in a phase of growth -- turnover has not been high but there has been an influx of new staff.

Women comprise 46% of total staff at ISNAR, being most numerous in the support category. In 1990, 88% of support staff and 10% of professional staff were women, almost the same as in 1986.
Professional staff are drawn from 20 different countries and support staff from 12, as of 1990. Three-quarters of the professionals are from developed and one-quarter from developing countries. Regionally, they are 40% North American, 30% European, 10% African, 10% Asian, 6% Latin American, 4% Australian. The regional distribution was quite similar in 1986, except that there were slightly more Europeans than North Americans.

ISNAR’s professional staff have impressive and varied developing-country experience. While some have extensive research management experience in developing countries, there is no one with developed-country research management experience.

In terms of disciplinary balance, the number of agricultural scientists was 14 in 1986 and 1990, while the number of social scientists has grown from 10 to 25. This shift in part reflects the development of ISNAR’s research activities. The remaining professional staff are in assorted fields, including information management, law, physics, etc.; overall, however, few program staff have formal management training.

In addition to its regular staff, ISNAR brings in fellows from developing (and developed) countries for periods of one to two years. During the last five years there were few such staff -- not more than two at any time -- due primarily to funding constraints.

ISNAR also supplements its small professional staff by employing consultants for specific projects, usually for short terms. During 1990, ISNAR hired 69 different consultants who worked the equivalent of nine senior staff-years, or 18% of the total professional staff years -- a proportion that has remained fairly constant since 1986. Of the consultants employed in 1990, 42% were European, 22% North American, 22% African, 7% Latin American, and the remaining 7% from Asia, Australia, and Oceania. About 16% of the consultants were women. While consultants' CVs are reviewed by the professional staff involved, there are no formal procedures for the selection of consultants. Usually individuals are selected either because they are known to ISNAR as international leaders in particular fields, are NARS collaborators, or have had previous interactions with ISNAR.

Based on ISNAR’s current programmatic focus, the directions in which ISNAR proposes to move, and current staff composition, some changes in staff composition will be appropriate. First, we find that the proportion of research associates and assistants to officers and senior officers is very low and should be increased, as already proposed by management. Second, while recognizing that ISNAR must continue to seek the most qualified candidate for each position, we suggest that its recruitment strategy should be geared toward increasing the ranks of professionals with formal management training and developed-country research management experience, along with increasing the proportion of women and developing-country nationals in the professional staff. Third, efforts should continue, and be expanded, through special project funding if necessary, to bring in research fellows from developing countries, giving special priority to Africa, as stated in the 1986 External Review. Finally, given the nature of ISNAR’s services, we support the
institute's use of consultants; however, we encourage the strengthening of recruitment and selection procedures by, for example, developing a data base of consultants (as is being considered by management). We feel that there would be CGIAR-wide benefits if consultant data and similar data were pooled for use by all centers.

10.3. Personnel Policies and Procedures

10.3.1. The New Staff Regulations

ISNAR's personnel policies are laid down in the new "ISNAR Staff Regulations," approved by the Board in 1991. These regulations are based on a comprehensive review and redrafting of the earlier document, conducted by the Administrative Officer with the assistance of an external consultant and after staff consultations. The significant features include detailed disciplinary measures and an appeals procedure in order to be able to invoke ISNAR's immunity from Dutch law. Earlier regulations did not contain such features. The new regulations also provide definitions and details intended to reduce discretionary interpretation by management, along with certain adjustments to improve the benefit package.

Many staff (particularly professionals) find the regulations too bureaucratic for an institution as small as ISNAR. Taken as a whole, while staff perceptions are somewhat ambivalent, the new regulations have had a negative impact on staff morale. Though the need for a comprehensive review of the old regulations is debatable, overall we found the new rules to be carefully thought out and generally consistent with CGIAR norms. We trust they will be implemented with sensitivity and accepted in good spirit.

10.3.2. Recruitment

As recommended by the last EMR, all professional positions are now advertised internationally, though in the past a few posts were not. Detailed selection procedures are enshrined in the new Staff Regulations. Selection panels are established to interview short-listed candidates for each position; based on their recommendations, the Director General makes the final selection. In addition to the formal procedures, which may not always be adequate for attracting the right candidates from certain categories (e.g., women and managers/scientists with research management experience in developed countries) and certain regions, we suggest that ISNAR staff, particularly when on official missions, informally scout for potential recruits and feed this information back to Management, as was done in the past.

10.3.3. Staff Induction

ISNAR does not have any formal induction procedures for new staff. The informal methods followed are not uniformly satisfactory. As a result, it takes time for staff to understand the Institute. We suggest that a formal process be established for the induction of new staff at all levels. This might cover broad aspects of the
CGIAR System, ISNAR’s role, and how the new staff member’s contribution fits into this picture.

10.3.4. Compensation

Due to the increase in ISNAR’s contribution to pensions and financial stringency, ISNAR staff did not receive salary increases last year. We reviewed the ISNAR salary and compensation packages and, overall, find them adequate and internally consistent. Professional staff packages are comparable with those in other CGIAR centers, allowing for the advantages of The Hague location.

Like those of professional staff, support staff salaries in ISNAR are tax-free in accordance with the headquarters agreement, but contrary to prevailing practice in almost all other CGIAR centers (in IBPGR support staff salaries are also tax-free; INIBAP is proposing to adopt the same pattern). Based on our discussions, provisions for support staff appear quite competitive with practices in the local market, although some support staff feel this is not the case. Support staff compensation packages were last reviewed in 1986; the external auditors are currently conducting a local remuneration and benefit survey, which will form the basis for possible upcoming revisions.

Management is in the process of developing a salary structure for all staff, to be introduced along with the new classification system (see paragraph 10.2). We urge Management to ensure that adequate flexibility is built into the new salary scales so that ISNAR is able to attract professionals in research management and other areas to meet its specialized requirements.

10.3.5. Staff Assessment and Rewards

The procedures for staff appraisal were reviewed in 1986-87 and a new system was introduced, based on self-assessment. Support staff discuss their assessments and work plans with supervisors, and professional staff discuss theirs with the Deputy Directors General and the Director General together. The staff were to be provided with written feedback on performance ratings. These, in turn, were to form the basis for annual salary increases. Some aspects of the process have not been followed in recent years.

ISNAR’s Management is working on a new reward system to be linked with the assessment process and to be introduced along with the new classification system and salary structure. Under the proposed system, in addition to an annual increase, staff will receive a nonpensionable lump sum for meritorious service.

While emphasizing the importance of written feedback and of linking rewards with assessments, we urge that the system provide incentives for more than individual achievement; it should take account of contributions to teamwork and institutional goals, and of performance across themes and countries/regions. The process should be forward-looking as well, linked with individual task planning, skill/career development, and institutional planning. In addition, it should involve
Program Directors and reflect other changes that accompany the new organizational structure (see Chapter 5).

**Recommendation 10.1.**

**ISNAR should establish guidelines for staff assessment/rewards that reflect the changes to be introduced in the organizational structure and reinforce institutional goals.**

10.3.6. Career Development

As a small organization with its present flat structure, ISNAR offers limited scope for career development in terms of promotion opportunities. For professional staff, there are many opportunities for skill development, job enrichment, and "horizontal growth" into new aspects of program work. ISNAR organizes in-house training in assorted areas and, for support staff, reimburses generously for job-related external training. However, opportunities for career growth are a particular problem for support staff, whose work is often routine and not always intellectually challenging. Despite this, ISNAR is able to attract highly qualified -- often over-qualified -- support staff with language and other skills, due largely to the abundant supply in the market and the attractive tax-free remuneration package (see paragraph 10.3.4). We encourage Management, in consultation with professional and support staff, to search for ways to improve this situation, based on ISNAR's requirements. One possibility might be to give preference to qualified support staff over outsiders for editing, translating, and other jobs (and compensating them appropriately), when this would not interfere with their other responsibilities.

10.3.7. Internal Communication

The Staff Advisory Committee on Administration (see Table 5.1.) is the main formal channel for staff-management communication. This body is composed of 11 staff, appointed by the Director General. Judging from staff reactions to the new regulations, we feel that better internal communication is needed at ISNAR. We suggest that a more representative advisory committee be created to provide inputs to Management. Staff should be encouraged to suggest items for discussion and also receive feedback on Management's decisions. In addition, we suggest that staff meetings be held regularly as a means of improving communication Institute-wide. On this front, we commend the Director General for calling meetings to inform staff of major issues. At the informal level, the Director General and Administrative Officer have an "open-door policy" for staff consultation. Professional staff take advantage of this opportunity more than support staff; support staff require more encouragement to do so.

10.3.8. Gender Issues

The Panel discussed gender issues at ISNAR with the Institute's "Gender Issues Working Group" and with individuals in the professional and support staff. Overall, no specific gender-related issues concerning the status or conditions of
professional or support staff at ISNAR were identified, and we were satisfied with the Institute's record. We were pleased to note that the new Staff Regulations are progressive in providing maternity leave of 16 weeks (in accordance with Dutch law), and to learn that special attention has been given during the past five years to identifying women who might be suitable candidates for Board positions, staff openings, and consultancies. We commend the progress on this front and urge the Institute to redouble its efforts given the low representation of women in the professional ranks.

10.3.9. Managing Human Resources

Staff morale at ISNAR is not what it was in 1986. Once the new Strategy and Medium-Term Plan are finalized and questions concerning organizational structure, pay scales, and reward system are resolved, staff will be able to focus on their work, and morale should improve. Yet ISNAR is a dynamic institution, always facing new demands and challenges. Its success in meeting these will depend on its staff, particularly as financial constraints bear down on the Institute (and its clients). Therefore, human resource planning, management, and development will be increasingly critical. Judging from concerns voiced by staff, more dialogue and staff input, along with sensitivity in policy implementation, are needed to rebuild morale and improve staff attitudes.

ISNAR's Administrative Officer is responsible for finance and general administration along with personnel. Clearly ISNAR would benefit from a full-time professional personnel manager. Given ISNAR's current size, an administrative structure that appears appropriate, and financial constraints, we hesitate to suggest the creation of such a position at this time. Instead, we suggest that greater emphasis be placed on strengthening the "people skills" of those involved in human resource management. This could include those directly involved in the personnel function, as well as professional staff, who also are managers. We are pleased to learn that some progress has already been made in this area; the Administrative Officer's assistant is pursuing training in personnel management and is assuming more responsibility for personnel functions -- a trend we feel should be continued. Ultimately however, the responsibility for the effective implementation of the personnel function rests with the Administrative Officer, within the policy framework set by the Director General and with his overall guidance and oversight. Based on our assessment of the current situation:

Recommendation 10.2.

The Director General should play a greater role in the guidance and oversight of human resource planning, management, and development at ISNAR.
CHAPTER 11 - FINANCE AND ADMINISTRATION

11.1. **Introduction**

ISNAR has an Administrative Officer with a staff of 15 who deal with host-
country relations, personnel, travel, accounting, computing, and office administration. The work of the Project Development Coordinator, who reports directly to the Director General, is also considered in this chapter.

It is our view that ISNAR's staff have managed its finances well, have ensured the integrity of the systems and procedures, and the timeliness of the financial reporting. The Institute has a sound base of financial management.

11.2. **Fund Management**

11.2.1. **Trends in Funding**

Table 11.1 shows changes in core funding. Although ISNAR remains heavily dependent on its top donors (the top three in 1991 will be the World Bank, USAID, and the EC), there has been some improvement over the years, and the proportion derived from its top donors is not very different from the CGIAR averages. Efforts continue to increase the number of donors, which has not changed significantly.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>3.03</td>
<td>3.32</td>
<td>3.49</td>
<td>4.58</td>
<td>5.47</td>
<td>6.31</td>
<td>7.46</td>
<td>6.85</td>
</tr>
<tr>
<td>No. donors</td>
<td>14</td>
<td>16</td>
<td>17</td>
<td>16</td>
<td>17</td>
<td>16</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td>Top 3 donors</td>
<td>60%</td>
<td>63%</td>
<td>64%</td>
<td>56%</td>
<td>45%</td>
<td>49%</td>
<td>47%</td>
<td>49%</td>
</tr>
<tr>
<td>Top 5 donors</td>
<td>72%</td>
<td>74%</td>
<td>74%</td>
<td>70%</td>
<td>59%</td>
<td>64%</td>
<td>61%</td>
<td>64%</td>
</tr>
<tr>
<td>Top 10 donors</td>
<td>89%</td>
<td>91%</td>
<td>90%</td>
<td>91%</td>
<td>86%</td>
<td>88%</td>
<td>85%</td>
<td>87%</td>
</tr>
</tbody>
</table>

Source: ISNAR and CGIAR Secretariat.

Table 11.1. shows the division between core (restricted and unrestricted) and special project (noncore) funding. The proportion of funding derived from special projects has not increased much as a percentage of the total and is similar to that of the system as a whole during the same period. The expectation seems to be that core funding will not increase; we hope, however, that the recommendations of this review will be acted on and that the core funding of ISNAR will increase.
Table 11.2. Recent Changes in Core versus Special Project Funding

**Actual 1986-1990, Est. 1991**

<table>
<thead>
<tr>
<th></th>
<th>1986 (%)</th>
<th>1987 (%)</th>
<th>1988 (%)</th>
<th>1989 (%)</th>
<th>1990 (%)</th>
<th>1991 (est) (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Core Funding</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advisory</td>
<td>33.4</td>
<td>32.7</td>
<td>28.4</td>
<td>27.6</td>
<td>30.8</td>
<td>30.7</td>
</tr>
<tr>
<td>Research</td>
<td>11.0</td>
<td>12.3</td>
<td>16.0</td>
<td>19.0</td>
<td>19.3</td>
<td>19.0</td>
</tr>
<tr>
<td>Training</td>
<td>11.8</td>
<td>11.0</td>
<td>14.0</td>
<td>14.1</td>
<td>12.3</td>
<td>11.8</td>
</tr>
<tr>
<td>Program support</td>
<td>7.9</td>
<td>9.2</td>
<td>6.5</td>
<td>5.7</td>
<td>4.6</td>
<td>6.5</td>
</tr>
<tr>
<td>Admin.</td>
<td>14.4</td>
<td>12.4</td>
<td>11.4</td>
<td>13.0</td>
<td>6.5</td>
<td>8.4</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>78.5</td>
<td>77.6</td>
<td>76.3</td>
<td>79.4</td>
<td>73.5</td>
<td>76.4</td>
</tr>
<tr>
<td><strong>Special Projects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advisory</td>
<td>14.5</td>
<td>10.2</td>
<td>11.6</td>
<td>10.1</td>
<td>11.1</td>
<td>12.2</td>
</tr>
<tr>
<td>Research</td>
<td>5.5</td>
<td>8.2</td>
<td>7.4</td>
<td>5.2</td>
<td>6.3</td>
<td>2.8</td>
</tr>
<tr>
<td>Training</td>
<td>1.5</td>
<td>4.0</td>
<td>4.7</td>
<td>5.3</td>
<td>9.1</td>
<td>8.6</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>21.5</td>
<td>22.4</td>
<td>23.7</td>
<td>20.6</td>
<td>26.5</td>
<td>23.6</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: ISNAR.

11.2.2. **Use of Funds**

Table 11.2 gives a breakdown of expenditure between advisory services, research, and training, based on staff time allocations. As staff only record their allocations of time quarterly, and many ISNAR activities are mixes of two or all three of these areas, designations are approximate. A detailed breakdown of research allocations is given in Chapter 7.

Table 11.3 gives a breakdown of ISNAR's total operating expenditures compared to the CGIAR average.
Personnel and travel costs are high, as is to be expected in an institute not conducting laboratory research and whose "field" work is in developing-country NARS. The second highest cost is in fact the building, which makes up most of the "supplies/services" heading in Table 11.3. In 1990, the costs (rent plus services and maintenance) of the new building occupied in 1989 was about US $870,000, representing an increase over 1988 of 65% (see 11.4.). It is because of these high building costs that ISNAR's overhead is so high (currently 39%). Discussions are taking place with the Dutch Government, whose contribution may be increased to cover the rent cost. The majority of CGIAR centers do not pay rent.

The present heavy commitment of core grant income to cover payroll, building rental, and other fixed costs is a matter of great concern. More than 100% of donor core grants are needed just to cover these costs. As a result, income from other sources (bank interest, staff services charged to special projects, etc.) is required in order to cover some of the operational costs needed for the core program. To resolve this difficulty will require either a reduction in fixed costs (ISNAR has already sublet one floor from its building) and/or an increase in core support.

The last EPR recommended that ISNAR follow a policy of full recovery of indirect costs on its special projects, but this has proved very difficult to implement. USAID has indicated recently its willingness to pay all costs on the special projects it is funding if other donors are willing to do the same, but so far, other donors of special projects are only recognizing direct costs. ISNAR will continue to press donors to pay the full costs of future special projects.

11.2.3. Asset Management

The capitalizable assets managed by ISNAR are relatively small, although the balance for fixed assets has grown from US $0.8 million in 1985 to US $2.2
million in 1990 (furniture, computers, etc.). Appropriate maintenance programs for these assets exist and in 1991 ISNAR will begin depreciation accounting. This change has the agreement of the Institute's external auditors and is being more widely considered in the CGIAR system.

As regards cash management, ISNAR has adopted a conservative policy of maintaining the minimum requirement of liquid assets for this operation and investing in only short-term (90-day) instruments. As ISNAR is small and the cash inflow from donors is uncertain, this policy seems right.

The current-asset-to-liabilities ratio has risen from 1.4 in 1985 to 3.5 in 1989 and 1990, whereas in service institutions like ISNAR, a ratio of 2 is generally considered adequate. ISNAR is therefore currently following a policy which may be unduly conservative, with loss of alternative income. ISNAR may wish to review this policy.

11.3. Financial Planning, Control, and Reporting

11.3.1. Planning and Budgeting

This process is generally managed by the Director General with key staff providing advice and inputs in the allocation of resources. Towards the end of the year, at the time of the self-assessment, all the research officers make a plan for the following year which includes an allocation of their time among different countries and projects, number of visits, etc. As noted in Chapter 5, because of the absence of middle management, there is, at present, only limited participation in the budgeting process by the professional staff. The overall integration of these inputs is carried out by the Planning and Development Coordinator and the Accountant. These two assist the Director General and Deputy Directors General in determining the budget and funding requirements, and also handle monitoring and control.

The last EPR recommended that staff take part in preparing the budget as well as in describing the programs to which the budget relates. We believe that greater participation is necessary and that this can be done under the new structure (see Chapter 5) which gives relevant budgetary authority to program directors.

11.3.2. Financial Management Information System

The Project Management Information System (PMIS) was developed by the Planning and Development Coordinator and introduced in 1987 to keep a check on special projects. It now contains information on 415 projects, of which 104 are "active." Costs, including quarterly allocations of staff time, are inputted against project codes. With the replacement of the Wang computer system by a PC network, new software using an integrated database is being introduced. This system would readily lend itself to delegating budgetary authority, e.g., to program directors. They could be responsible for managing, monitoring, and controlling their respective budgets for their financial as well as their human resources. Information can also be
provided on allocations by region or country. We commend ISNAR for its work in this area.

At present, PMIS reports are circulated to senior management. Staff may request copies of the reports and the data are accessible on the Wang computer system. The extent of the information provided can be extended as required to include other significant costs, e.g., travel, and the reports could be circulated in future to program directors, regional coordinators, and leaders of special projects.

11.3.3. Financial Accountability

As ISNAR is small and can only have a limited number of staff dealing with accounts, the system of checks and balances to ensure proper financial control is critical. The Purchases and Contracts Committee (see Chapter 5, Table 5.1.) recommends appropriate expenditure, which is controlled by the Accountant. Limits of authority have been established for the key officers of the Institute. The system of controls in some cases is currently highly centralized, e.g., all travel requests have to be approved by the office of the Director General, regardless of the length of travel time. This should be changed concomitantly with the recommended budgetary authority to be given to middle management.

In 1990, the external auditors proposed to increase their fees by 150%. The audit service contract was rebid and a new external auditor appointed, providing an opportunity for a fresh look at ISNAR's financial systems. A financial resource person to our Panel met with the Partner and Auditor in charge of the ISNAR account and was satisfied that their audit was complete. Members of the Panel attended the meeting of the Executive Committee of the Board in March 1990 at which the audited accounts were discussed in the presence of the Auditors. The need for an internal auditor was also considered at that time and it was concluded that, in view of the size of ISNAR, it could not be justified. The Board decided that internal audit activities should be undertaken. A separate budget line was established and management was to arrange for specific internal audit assignments, in close cooperation with external auditors.

11.4. Administration

The management of human resources has been discussed in the preceding chapter. Here we only wish to state that the Administrative Officer's assistants in the Personnel area who work on recruitment, the personnel database (developed since the last review), etc., are doing an effective job.

Staff travel is dealt with by the Travel Coordinator who spends about 80% of her time on that and helps with administrative duties. ISNAR's staff are highly satisfied with the travel arrangements made on their behalf and acknowledge that the Coordinator is extremely knowledgeable in her field. She is also effective in getting the best available discounts for the Institute.
Computing has been discussed in Chapter 9. As indicated there and in
Chapter 3, we believe that the computing function should be integrated with other
aspects of information in a coherent unit, or possibly in a unit comprising both
Information and Training. In future, it would appear appropriate that the immediate
supervisor of the computing staff should be the information management specialist.

ISNAR works in a pleasant modern building which provides good working
conditions. Although the cost per square meter is less than in the old building,
provision of space is rather generous, hence the increase in overall cost.

ISNAR has been successful in trying to keep its operating costs down,
including the costs of administration, for example, by changing catering services in
1991, by moving staff payroll arrangements from IIE in New York to the house bank
(Rabobank) in 1987, and by tightening travel policy to reduce unnecessary use of
high-fare tickets (while retaining some staff discretion).

Scientists tend to view administration as a necessary evil and to carp about
rules. It appears to us that there definitely were slack procedures which needed to be
tightened up. At the same time, perceptions are important, and administration needs
to be seen as serving ISNAR in such a way as to enable it to carry out its essential
work in the most effective way, to ease its functioning and not to impede it. Greater
attention to people, as emphasized in the preceding chapter, will improve the image
of ISNAR’s administration.
CHAPTER 12 - EXTERNAL RELATIONSHIPS

12.1. Introduction

ISNAR’s stakeholders constitute a group of greater heterogeneity than that of other IARCs. ISNAR’s complex mandate is a manifestation of the number and diversity of the stakeholders. Recent expansion of the CGIAR to cover the area of natural resources and general concern for "sustainability issues" in agricultural production, will increase the complexity of the agencies and interests to which ISNAR might relate.

12.2. ISNAR’s Relationship with NARS

ISNAR’s key "clientele" are the NARS, and its primary mission remains the strengthening of national agricultural research capacity in the areas of policy, organization, and management. The concept of NARS has evolved to embrace universities and the private sector. In many developing countries, national agricultural research agencies have by now developed joint efforts with universities and the private sector. In some cases, special advisory bodies or councils which integrate all of the institutions concerned with agricultural research have been created, often on the basis of recommendations from ISNAR, to determine priorities and coordinate research.

Advisory services, increasingly backstopped by research, have remained ISNAR’s most important program and modus operandi to get in contact with NARS. The diagnostic review as the first stage of the DPI paradigm has been the usual way to start out the relationship with a country, once the request or national invitation has been received and accepted by ISNAR. Recognizing that institution-building is a long process, ISNAR has extended its relations with some countries to more than 10 years. We are concerned at the large gap between the time recommendations were made and their actual implementation by governments.

Once the relationship has been established, the NARS have appreciated ISNAR’s level of commitment, independence, and continuity. We are in general impressed with the highly favorable reports on ISNAR’s work by NARS leaders and managers that we gathered during the country visits. ISNAR is highly regarded for its low-profile style of cooperation and its role as a facilitator of change, in institution building and in providing needed services.

It was apparent through the country visits and other information available to us (the Panel survey and various ISNAR documents) that, as one would expect, the NARS with which ISNAR works also have changing needs and demands. This partly reflects a changing world and, partly, their own advancing histories with ISNAR. First, it has become clear to us that ISNAR should make a stronger commitment to supply management tools and training materials targeted to different audiences that
can be readily used by NARS. Second, the kinds of services being demanded are changing. In a recent consultation organized by ISNAR with NARS leaders, participants were asked to identify the types of collaboration/support that would be of most relevance to their organizations in the year 2000. This was their ranking of four broad categories of ISNAR activities: improved knowledge and tools for research policy, organization, and management; training; advisory service; and information and publications.

The emphasis given by NARS to tool development and extension-type materials is aimed at building a permanent capacity in agricultural research policy, organization, and management. This desire for self-reliance is illustrated by one NARS leader's answer to the Panel survey question concerning what is the most serious weaknesses of ISNAR: "Absence of deliberate provision for building NARS's own training capacity in agricultural research management in most projects."

12.3. ISNAR's Relationships with Regional Organizations and Networks

The involvement of ISNAR with regional organizations and networks to promote research and the exchange of information has been a topic of long-standing discussion. The 1985 EPR recommended that ISNAR curtail direct involvement with regional organizations; however, ISNAR has continued to cooperate with some regional organizations and has participated in many seminars and events.

Interestingly, NARS leaders and donors have similar views about the importance of regional organizations. On the one hand in the ISNAR questionnaire to donors, all respondents agreed that "ISNAR should increase its collaboration with those organizations, since their role was becoming more important, although their past success has been mixed. ISNAR could analyze the reasons for this, and catalyze the formation of innovative modes of research collaboration amongst NARS. To do this, ISNAR needs to go beyond its past preoccupations with structure, organization and management in NARS."

On the other hand, NARS leaders at the recent ISNAR consultation were asked to compare the role of certain types of agricultural research organizations from now to the year 2000. "Of the seven types of organizations, only the public sector was considered to be less important in the year 2000. The rest, all of which were considered more important, in descending order were: regional research organizations and/or networks, private-sector companies, and/or corporations, universities, parastatals/research foundations, NGOs, and IARCs."

In the African and LAC regions, a number of regional entities and networks are quite active in agricultural research. Among them are SAFGRAD, CILSS,
Institut du Sahel, and SACCAR in sub-Saharan Africa; AARINENA in West Asia and North Africa; IICA, CARDI, CATIE, PRECODEPA, PROCISUR, and PROCIAINANDINO in Latin America and the Caribbean region. They differ extensively in the scope of their activities and their resources. Some receive exclusively donor assistance, others rely on a mix of donors and country contributions. In addition there are networks promoted by IARCs for the commodities under their responsibility. The cooperative efforts promoted by the countries themselves tend to pull out scientists from different NARS to build a critical mass of people around a given agricultural research initiative. In some cases, this approach has provided an answer to the "small-country problem," where particular countries lack enough total acreage under given crops to justify keeping separate crop-specific research teams.

Closer collaboration with development agencies or regional organizations has been considered by TAC as one of the options to carry out "research assistance" by the IARCs. These development agencies and regional mechanisms have at least two important features from ISNAR’s perspective: 1) they provide a forum for discussion of different agricultural research opportunities, technological as well as institutional, with top research managers, 2) they are project-implementing entities and can provide ISNAR the opportunities to keep in touch with developments without being directly involved in implementation.

In no way should the association or collaboration with regional entities be seen as a substitute for ISNAR’s more direct assistance to individual NARS. However, tool testing and adjustment as well as collaborative research in topics of common interest could be greatly enhanced through a more intensive association with regional organizations and networks.

12.4. ISNAR Collaboration and Relations with Other IARCs

In the past five years, ISNAR, while developing itself, has been developing its relations with other centers in the CGIAR system. It is now understood that the other IARCs do not want ISNAR trying to mediate their interactions with the NARS. But ISNAR can draw on other centers' experiences with national programs, albeit in their specialized commodity or mandate areas. In particular, ISNAR should integrate its training efforts with those of other IARCs, including components on organization and management of agricultural research programs.

As discussed in Chapter 2, TAC has recently proposed an ecoregional approach to build on past experiences in the CGIAR. This new concept would provide an innovative means for organizing and implementing expanded research on resource management in the CGIAR, while continuing the emphasis on improved agricultural productivity. The ecoregional approach is also expected to improve the coordination of interactions between IARCs and NARS.

Commodity centers are expected to outpost staff to the ecoregional entities to join multidisciplinary teams with in-depth, hands-on knowledge of the natural potential and constraints of the ecoregion. TAC expects other subject-matter centers
like IFPRI, ISNAR, and IBPGR to find attractive grounds for collaboration with the proposed ecoregional entities. In particular, TAC suggested that ISNAR consider outposting staff members to the ecoregional centers to help coordinate the ISNAR program in the region and to ensure that ISNAR's advances in research management are disseminated to countries in the region.

In principle, we support ISNAR's participation in these ecoregional entities. This view is consistent with our recommendations that ISNAR look for third parties and intermediaries to achieve a multiplier effect and expanded impact on the management capacity of NARS. We believe that this is an additional responsibility for which ISNAR should be given new resources.

12.5. Relations with FAO

ISNAR's relationship with FAO has constituted an "evergreen" issue ever since the "original sin" of ISNAR being created without the blessing of FAO -- although it is a CGIAR cosponsor. However, it is now widely accepted that the two entities have different comparative advantages and that their relations will continue to improve. We are pleased that the provision for an FAO nominee to attend the meeting of the ISNAR Board as a nonvoting member continues to be followed.

Several training events, such as seminars and workshops, have been jointly organized, with FAO providing fellowships as well as expertise in some fields. FAO is the global repository of agricultural data. However, we believe that ISNAR can appropriately continue to be the source for the time series related to NARS indicators and performance.

FAO's comparative advantages, vis-à-vis those of ISNAR, seem to be more in technical assistance and in acting as an implementing agency in the area of rural extension and technology transfer. FAO does not see the work of ISNAR in the interface between research and extension as inappropriate. What has been said about regional organizations providing ISNAR with opportunities for hands-on project implementation without direct involvement is also applicable to FAO.

We suggest that in addressing new emergent issues to the CGIAR, such as forestry, fisheries and natural resources management, ISNAR should recognize FAO's expertise in these fields. We noted that ISNAR has already started a dialogue with FAO regarding forestry, and we encourage ISNAR to move in that direction. The Panel believes that many of the approaches being developed and applied by ISNAR to strengthen the management of agricultural research institutions are equally applicable to forestry and fisheries research organizations.
12.6. **ISNAR’s Relationships with Donors**

Donors seem to have a wide range of expectations regarding ISNAR, and the Institute has always had a complex mandate about which it is difficult to get a consensus.

ISNAR is aware that donors have different agendas. Some are more interested in seeing the Institute work in-depth in one country at a time. Others are more concerned with the production of management components and tools that can be wholesaled to an array of countries. Some donors value ISNAR’s ability to serve as an honest broker among the many actors that may impinge on a NARS -- governments, NGOs, multilateral donors, and other IARCs. Yet other donors are keen to see ISNAR address such emerging issues as biotechnology and agricultural sustainability.

ISNAR’s role in encouraging coordination has proven to be particularly valuable in cases where a number of donors have agreed to work together to strengthen a particular NARS. The emergence of SPAAR as a regional mechanism dedicated to donor coordination has important implications for ISNAR. Cooperation between ISNAR and SPAAR in exchanging information is useful. Yet as a facilitator of donor complementarity, ISNAR should take pains to continue looking at interdonor issues through the eyes of the NARS it serves.

There is some danger in the variety of demands that donors collectively place on ISNAR. They can engage the Institute in too wide a range of activities. We urge donors to respect the limitations of the Institute. Yet we would agree with management that new ventures will need to be considered case by case.

12.7. **Host-Government Relations**

The Dutch delegate to the meeting that established ISNAR had instructions to urge a developing-country location for the new institute. He returned to report that it was coming to The Hague. Although they did not seek the Institute, the Dutch have been fine hosts, although the Center would like to have its facilities rent-free. We strongly support efforts to improve this situation. A Dutch contribution that, in one form or another, covered all of the rent could give the Institute an added, much needed, degree of financial freedom -- which could serve, for example, to reduce its overhead on special projects, which donors rarely pay.

Other legal complications posed by ISNAR’s Dutch (and, more generally, European Community) location have been noted in Chapter 3. Some are being resolved; others (notably the employment of spouses) resist solution and deserve to be included when the location of the Institute is reconsidered, which, in Chapter 2, we recommended should take place during the next three years.

The Dutch Government’s nominee has been an active and valuable member of ISNAR’s Board. Meanwhile, ISNAR’s Director General is seeking more contacts
and interchanges with relevant firms, agricultural research and development studies institutes, and other nongovernmental institutes in Holland and other nearby European countries. From its side, the Department of Development Cooperation in the Dutch Ministry of Foreign Affairs is recasting its CGIAR strategy to put more emphasis on capacity building and the interface between research and downstream activities. It recognizes ISNAR's expertise in these areas and hopes to seek Institute inputs into the Department's revised planning. What has been a friendly and satisfactory relationship is on the way to becoming considerably more constructive.
CHAPTER 13 - OVERALL ASSESSMENT -- AND THE FUTURE

13.1. Introduction

The last review gave ISNAR the go-ahead: it had established itself, it should be recognized as a fully fledged member of the CGIAR system. We assess that it is now a going concern and doing a very important job in relation to a vast mandate, although with inadequate resources. Like a child growing towards adulthood, it has experienced growing pains, has experimented, has made some mistakes, but has also learned from them. Inevitably our report focuses on shortcomings, and that is just what a review is supposed to do, but we would like to emphasize that our perceptions of the present state of ISNAR and our recommendations are fundamentally based on ideas and suggestions which have come from ISNAR itself, as well as from NARS. We commend the Institute for the self-examination that has been in process for quite some time, culminating in its last internal program review and the preparation of the numerous papers for our Panel. We believe that our conclusions will be widely shared by the Institute's staff, if not in all details then certainly in their spirit and intention. Our wish is to foster the continuing growth of ISNAR. It already has given significant help to NARS and has achieved a merited reputation for maintaining political and donor support.

13.2. Investing in ISNAR

ISNAR's mission is now better understood worldwide. Both in the CGIAR system and among donors generally, the fundamental importance of strengthening NARS is now recognized (though arguments continue as to which approaches are best). "Sustainability" has acquired an additional dimension: we are concerned not only about the sustainability of agricultural production but also have come to see that the aim must be to strengthen NARS to the point that they can sustain themselves without endless donor transfusions. It is for this reason that the CGIAR system is undertaking to devote a significant proportion of its core funds to system building, even though the funding of ISNAR (about US $ 7 million out of US $ 235 million for the entire CGIAR system) remains remarkably small. If donors are aiming for both kinds of sustainability, a little less spent on buildings, cars, and equipment, and a little more in institution building would constitute a sounder long-term investment. That means, among other measures, supporting ISNAR more generously, because of its central role in that endeavor, and because, being an infant of the system, it came late to the table.

As argued in previous chapters of our report, there are particular areas in which ISNAR requires additional core funding. Here we mention again outposting some professional staff to ecoregional CGIAR centers, as a multiplier for its research, advisory, and training work, for networking, and for monitoring; increasing the very low numbers of professional support staff (associates and assistants) to increase the effectiveness of the highly experienced senior professionals; strengthening training and
information services; and for providing fellowships for professionals from developing countries. With regret we have to point out again that even the last of these has not received any support from special projects.

**Recommendation 13.1.**

CGIAR, recognizing the central role of ISNAR in institution building, should increase its actual core funding by not less than US $2 million in 1993 with some continuing growth thereafter.

13.3. **The Substantive Span of Attention: Some Broadening**

ISNAR needs to be able to promote better management of research in those substantive fields NARS address. Thus, there is pressure on the Institute to keep abreast of new aspects of "agricultural science," broadly construed, and this is doubly the case when the new subjects have been taken on board the CGIAR system. Yet there is a counter need for ISNAR not to spread itself too thin. These competing considerations prompt the following assessment of the choices the Institute currently faces concerning its substantive span of attention.

13.3.1. **Sustainable Development -- An Intensified Natural Resource Focus**

Here there is no option. The new emphasis on protecting the natural resource base while boosting agricultural production is deadly serious. Like every other IARC, ISNAR must become, not just dutifully, but actively conversant with the new research demands of sustainable agricultural development. As soon as feasible, this new ingredient should be evident across the staffing as well as the content of the Institute's thematic programs.

13.3.2. **Biotechnology**

In Chapter 7 we have recorded our approval of the kind of entrée ISNAR has made into this area. It is supplying the kind of management information NARS want, is admirably networked with a great variety of specialists and institutions, and is in position to maintain a high measure of literacy at modest further cost.

13.3.3. **Forestry and Fisheries**

Here, even though the pertinent institutes are being taken into the CGIAR family, we caution against heavy ISNAR involvement, at least in the near term. FAO has a great deal of technical expertise in both the forestry and fisheries areas, which its Research Development Center should be able to translate into effective subsector-oriented research. At the same time, the research management issues in fisheries and forestry are not very different from those in other portions of agriculture, broadly considered. Thus, what ISNAR has to contribute to the latter in its partner countries may be applicable to these added fields as well.
13.3.4. Irrigation Management

IIMI's recent inclusion in the CGIAR system provides ISNAR with an opportunity to exchange ideas with a sister institute with a different but related mandate, i.e., social science research on irrigation management versus research management. Both institutions work largely through field research in collaboration with developing country institutions. Both also synthesize their location-specific results into principles organized along themes. We encourage ISNAR to continue to develop its dialogue with IIMI.

13.4. An Agenda for Future Improvements

13.4.1. Upstream-Downstream Linkage

The whole restructuring of ISNAR is supposed to create, in each thematic program, a seamless web running from research to services to training and back again. But it will take, not only unflagging management attention, but an all-hands effort to marry the two (research and field-operations) cultures, close the generational and other gaps and make upstream-downstream integration work. There can be many contributions to this cause. For one thing, most individual staffers, as they are intended to do now, should continue to play mixed research, advisory, and/or training roles. Second, care can be taken to concentrate the research agenda on studies promising more direct and serious service pay-offs. Further, country officers and other field operatives should take care to keep their minds open to new-fangled insights and tools coming from research -- and be on the lookout for ways to collaborate with the latter. The next five years will do much to determine how realistic the slogan, "a research-based service" is.

13.4.2. Recruitment and Personnel-Management Priorities

There is a felt need in ISNAR, articulated at various points in this report, for more of the right kinds of management-analysis expertise. The Institute's leadership has some further experimenting to do. We have suggested that it try experienced developed-country research managers. There is some more tapping to be done into academic management and administrative studies. Experienced NARS personnel of a reflective, analytical bent can contribute importantly. The recruitment effort in these areas needs to be imaginative as well as thorough.

We have noted a broader tilt that professional recruitment needs: senior officers should be supported by more assistants, apprentices, and interns. To the extent the budget allows, many one-person field missions could usefully be expanded into two- or multi-person teams -- often assigned (to continue one of our themes) on a regional rather than single-country basis.

Finally, as to personnel, it is important that ISNAR redouble its good efforts to recruit women, particularly at senior levels, and build the quality of the staff by means of national and cross-regional diversity.
13.4.3. **Maintaining a Balanced, Manageable Program**

It may seem to short-change the following key points to lump them under a single heading, yet they must be aspects of a single design.

In the first place, ISNAR will have to keep monitoring its allocation of resources among its thematic programs. This, as we have suggested, may be biased somewhat toward organization and management, with a lighter ration for research policy. But the balance will need to be kept under review as events in the NARS and their environments evolve.

Second, the question of the allocation across research, services, and training will remain, of course. We are not suggesting what this split should be; the right allocation will derive from ISNAR's Strategic Plan. At the same time, as in the case of the thematic allocation, the upstream-downstream division will need to be kept under continuing review. A similar point could be made about monitoring the cross-regional allocation of ISNAR's program.

Further, and more pivotally, we would emphasize the need for a thoughtful, and reasonably firm, allocation across the three kinds of services ISNAR provides, and the partner-country groups to which the services go.

(a) First, there will be a very limited portfolio of countries in which intensive, long-term institution-building efforts are under way. Currently, the Institute is thinking about a dozen of these at one time, and that seems to us about right.

(b) Second, there is the larger set of countries (not all of them graduates of the intensive phase) to which ISNAR will be retailing selective components and other limited services and/or with which it will be engaging in collaborative research. We have found no ceilings placed on the size of this set in any documentation that we remember. There should be such a ceiling -- perhaps not public but quite firm.

(c) Third, the operational plan will include an estimate of the number of countries to which ISNAR will be wholesaling -- via training materials, training conducted in collaboration with regional centers, and publications.

In the last case the ceiling on the number of outreach targets can be high and elastic. Moreover, in front of the foregoing categories, there is a place, to the degree the budget allows, for quick exploratory assessments of country needs made at the request of developing-country governments. There is also occasion for ISNAR periodically to do some reporting on the general state of developing-country NARS to a very wide audience. But it is essential that the Institute adhere to the constraints it has imposed on the sizes of the first two classes of clients listed above. It must guard against an inability to say no.
Finally, in terms of future program outlines, there will be the considerations concerning poverty and levels of NARS sophistication discussed in Chapter 4. Choices of the intensive institution-building cases should be poverty-oriented. The group should be limited to comparatively weak NARS that seem to warrant ISNAR’s full institution-building treatment. (At the same time, in choosing countries within a low-income region, it may be appropriate not to go for the very weakest NARS in order to help develop what can become a lead country within the region.) Elsewhere, in the Institute’s selective services portfolio, however, it will be desirable to maintain the range of country types discussed in Chapter 4.

13.4.4. External Relations

We hope we are correct in seeing ISNAR moving somewhat more toward the center of the CGIAR stage and getting an increment of resources to underpin its expanded role. As emphasized, new relations with ecoregional centers can be vital. Relations with global IARCs (although involving no significant brokering between the latter and NARS) should become more seasoned and confident.

ISNAR will not work explicitly as an agent for raising foreign exchange for NARS, but as its stature grows, donors will turn increasingly to the Institute as a neutral adviser of NARS funding proposals. Still under external relations, we see the strains between FAO and ISNAR receding into the past as the two strengthen their already intensive interchanges and find more occasions for collaborative as well as complementary operations.

Finally, under external relations, it is appropriate to repeat our advice to reexamine the question of the Institute’s location. The pros and cons of staying in the Netherlands may be rather nicely balanced. But the considerations are substantial ones and deserve a careful review.

13.4.5. Attention to Equity

The CGIAR system is rightly concerned that its members, along with issues of environment and gender, give adequate attention to matters of equity -- not only between countries (where we endorse ISMAR’s concentration of major institution-building programs on weak NARS) but within partner countries. Even though they are limited, there are ways agricultural research management can affect domestic distributional outcomes. ISNAR staff are mindful of such possibilities and should be encouraged to keep them in view. Equally, however, they should be encouraged to avoid simplistic misreadings of the equity priority.

13.5. A Final Word

We live in a development-promotion era in which the fashion is financial austerity. At times austerity can be penny-wise and pound-foolish. ISNAR provides an example. It needs, like any tax-supported activity, to keep pressing for greater efficiency. But, given the good management that is in place, there are few of the
Institute's constraints in meeting its mandate that could not be greatly reduced by some extra funding. A little more money could be highly cost-effective.
ACKNOWLEDGEMENTS

We sincerely thank the Board, Management and Staff of ISNAR for their help and support during all stages of this Review. They have been unstinting in their efforts to facilitate the work of the Panel whether providing documentation, organizing the country visits, or responding frankly to our many questions. We also appreciate the inputs from the many NARS leaders who took time from their busy schedules to speak with us directly or respond to our questionnaire.

Special personal thanks are due to Christian and Judy Bonte-Friedheim for their generous hospitality. We also appreciate the liaison work of ISNAR Staff, Doug Horton, Warren Peterson and Deborah Merrill-Sands.

Arlene Slijk-Holden, Lorraine Walton, Willy Dooren and Cathy Wheat toiled, not only tirelessly and cheerfully, but with remarkable efficiency, typing the many drafts of the report, for which we give them special thanks.

Thanks are also due to Gerry Toomey and Kathleen Sheridan, the ISNAR editors, who helped polish the report in its final stages.
SECOND EXTERNAL PROGRAM REVIEW OF ISNAR
PANEL COMPOSITION AND BIOGRAPHICAL INFORMATION

Chairman

Professor John P. Lewis
Woodrow Wilson School
226 Bendheim Hall
Princeton University
Princeton
NJ 08544-1022
U.S.A.

Members

Dr. Edgardo R. Moscardi
Director General, INTA
Instituto Nacional de
Tecnología Agropecuaria
1º Piso, Oficina 101
Rivadavia 1439
1033 Buenos Aires
ARGENTINA

Dr. Bakary Vassery Ouayogode
Directeur des Programmes de
Recherche
Ministère de la Recherche
Scientifique et de l'Enseignement
Professionnel et Technique
B.P. V 151 Abidjan
COTE D'IVOIRE

Mr. C. Srinivasa Sastry
"AVANTI"
H. No. 8-2-677/B/3
Road No. 12
Banjara Hills
Hyderabad, 500034, Andhra Pradesh
INDIA
Professor Burton E. Swanson  
113 Mumford Hall  
University of Illinois  
1301 West Gregory Drive  
Urbana  
Illinois 61801  
U.S.A.

Dr. Tilo L.V. Ulbricht  
2 Eyot Gardens  
London W 6 9TN  
UNITED KINGDOM

**Resource Persons**

Dr. Eric T. Craswell (Panel Secretary)  
TAC Secretariat  
F.A.O. - AGR/TAC  
Via delle Terme de Caracalla  
00100 Rome  
ITALY

Ms. Elizabeth M. Field  
CGIAR Secretariat  
World Bank  
1818 H Street, N.W.  
Washington D.C. 20433  
U.S.A.
BIOGRAPHICAL INFORMATION

Name: John P. Lewis (USA)

Present position: Professor of Economics and International Affairs, Princeton University.

Specialization: Economics


Name: Edgardo R. Moscardi (Argentina)

Present position: Director, National Institute of Agricultural Research and Extension (INTA), Buenos Aires, Argentina.

Specialization: Agricultural Economics; Agricultural Research Administration

Education: B.Sc. Agricultural Engineering, National University of Cuyo, Mendoza, Argentina (1968); M.Sc. Agricultural Economics, Postgraduate College of Chapingo, Mexico (1971); Ph.D. Agricultural Economics, University of California, Berkeley, United States of America (1975).

Experience: 1969-70: Associate Researcher, Faculty of Agriculture Sciences, Department of Rural Economy, National University of Cuyo, Mendoza; 1971-72: Researcher/Professor, Department of Agricultural Economics, Postgraduate College of Chapingo, Mexico; 1972-74: Research Assistant, Department of Agriculture and Research Economics, University of California, Berkeley, United States of America; 1974-75: Predoctoral and Postdoctoral Staff, and 1976-77 Economist, Economics Program, CIMMYT, Mexico; 1977-82: CIMMYT Regional Economist for the Andean Zone, Economics Program, Quito, Ecuador; 1982-83: Adviser to the Rural Technology Transfer System (STTR), Quito, Ecuador; 1983-86: Adviser on
Agricultural Technology and Policy Issues, Secretariat for Agriculture, Argentina; 1986 to date: Director of INTA, Buenos Aires; 1984-88: Regional Representative for Latin America, CGIAR Panel Member 3rd CIAT EPR (1989). Member, Board of Trustees, Agronomic Center for Tropical Research and Education (CATIE). Member, Board of Trustees, International Center for the Improvement of Maize and Wheat (CIMMYT). Recipient of a number of awards and fellowships in the field of agriculture. Author and co-author of selected publications and articles in journals.

Name: Bakary V. Ouayogode (Côte d'Ivoire)

Present position: Director of Research Programs and Training, Ministry of Scientific Research, Technology and Professional Training, Republic of Côte d'Ivoire.

Specialization: Entomology.

Education: Ph.D. (1979), M.Sc. Entomology, Utah State University, United States of America (1976); University studies at the National University of Abidjan with Diploma in In-Depth Studies (DEA) in Tropical Ecology (Animals) (1970-73); Baccalaureate (Série D), Dabou School, Côte d'Ivoire (1968).

Experience: 1979: Research Associate (Entomology), Ministry of Scientific Research, IDESSA, Bouake, Côte d'Ivoire and 1981-83 Chief, Division of Plant Protection (DCV); 1983-86: Representative for Central and West Francophone Africa, Imperial Chemical Industries (ICI)/Plant Protection Division (PPD), Bingerville, Côte d'Ivoire; 1987 to date: Director, Research Programs and Training, Ministry of Scientific Research, Central Administration, Côte d'Ivoire.

Member of IITA external grain legumes program review. Member of the Board of CRES (Regional Center for Solar Energy Research), Bamako, Mali. Member of the Board of SODEMI (Société de Développement des Mines) in Abidjan. Author and co-author of some 20 publications in refereed journals. Participation in numerous international conferences and seminars. Member of various national and international scientific societies.

Name: C. Srinivasa Sastry (India)

Present position: Consultant. Was in the Indian Administrative Service (IAS) and retired as Agriculture Secretary to the Government of India (GOI).

Specialization: Management; Agricultural Planning and Development

Education: B.Sc. and M.Sc. in Geology from Andhra University, India; Advanced Diploma in Public Administration, University of Exeter.

Experience: Was a member of the IAS from 1956-1990, holding a series of key posts, including District Collector, Krishna; Managing Director Small-scale Industrial Development Corporation and State Finance Corporation; Permanent Secretary in the Departments of Education, Irrigation and Power, Command Area Development and Food and Agriculture in Andhra Pradesh; Under Secretary, Community Development; Deputy Director L.B.S. National Academy of Administration; and Additional Secretary of Defence in the GOI.

From 1986 until 1990 was the Permanent Secretary, Agriculture, and Cooperation and Coordinating Secretary for all four departments of the Ministry of Agriculture of the
GOI. Also a Member of the Governing Bodies of the Indian Council of Agricultural Research; Vice Chairman of the National Cooperative Development Corporation; Director, National Bank for Agriculture and Rural Development; and Member, Board of Governors, International Crops Research Institute for the Semi-Arid Tropics (ICRISAT). Has led the Indian Delegation to sessions of the FAO COAG and Council, to the RAPA Conferences, and to FAO Conferences. Chairman of the Group of Experts that reviewed FAO's Field Operations (1988-89). Consultant to the World Bank. Director on the Boards of a number of joint stock companies. Awarded Padma Sri in 1990 by GOI.

Name: Burton E. Swanson (USA)
Present position: Professor and Director, International Program for Agricultural Knowledge Systems, University of Illinois at Urbana-Champaign.
Specialization: International Agricultural and Extension Education
Education: B.Sc. in Agricultural Education, University of Illinois, Urbana, Illinois (1959-61); M.Sc. in International Agricultural Development, University of California at Davis (1966-68); Ph.D. in Development Studies, University of Wisconsin (1970-74).

Name: Tilo L.V. Ulbricht (UK)
Experience: 1960-66: Head of Nucleic Acid Unit; 1966-71: Research Director, Twyford Laboratories Ltd., London (Subsidiary of Guinness); 1971-76: Head of the Planning Section and 1976-83: Senior Scientific Adviser, Agricultural and Food Research Council; 1973-83: Member of EC Committee on Agricultural Research; 1976-85: Chairman of OECD Management Committee for Projects on Food Production and Preservation. Editor, "Agriculture Ecosystems & Environment". Honorary Research Fellow, Center for Agricultural Strategy, University of Reading. Honorary Visiting Professor in Food Policy, University of Bradford. Consultant to FAO, World Bank, CGIAR, EC, UK Meat and Livestock Commission, etc.
APPENDIX II

TERMS OF REFERENCE FOR EXTERNAL REVIEWS

1. BACKGROUND

The Consultative Group on International Research (CGIAR) has charged its Technical Advisory Committee (TAC) with the responsibility of conducting External Program Reviews (EPRs) of those International Agricultural Centers (Centers) that it supports financially. The CGIAR has assigned a similar responsibility to its Secretariat for organizing External Management Reviews (EMRs).

TAC and the CGIAR Secretariat normally discharge their respective responsibilities for EPRs and EMRs by commissioning either separate panels or a joint panel to conduct the reviews and to submit reports for consideration and comment by TAC before they are transmitted to the CGIAR. In commissioning panels, neither TAC nor the CGIAR Secretariat delegate their responsibility for reviews, but use panels to facilitate the process. While the main recommendations made by panels are normally endorsed both by TAC and the CGIAR, such endorsement cannot be presumed by either the panels or the Center under review.

2. PURPOSE

Through its support of International Centers, the CGIAR aims to contribute to increasing sustainable food, fisheries and forestry production in developing countries in ways that improve the nutritional level and general economic well-being of low-income people. The purpose of external reviews is to help to ensure that the Centers continue to implement strategies and programs that are relevant to these goals, that they maintain or enhance their record of achievement, and that they are efficiently managed. In these ways, external reviews reinforce mechanisms of accountability within the System.

EPRs and EMRs are also essential components of the CGIAR's integrated planning process. The context in which they are undertaken is to be found in the document "Review Processes in the CGIAR".
3. **THE REVIEW**

Against this background, the panel was requested to make a thorough and independent appraisal of the Center and all its activities, with particular reference to the questions listed below.

**A. Recent Evolution of the Center**

1. What important changes have taken place in the Center since the previous Review? What are the likely effects of these changes on the future performance of the Center?

2. How responsive was the Center to the recommendations of the previous Review?

**B. Mandate**

3. Is the Center’s formal and operational mandate and its interpretation appropriate in relation to the mission and goals of the CGIAR?

4. Is the operational mandate appropriate to the present and possible future areas of work?

5. What scope and difficulties would ISNAR see in embracing irrigation, fisheries and forestry research policy, organization and management issues into its mandate?

**C. Strategy and Programs**

6. Within the context of the CGIAR, does the strategic plan provide an adequate basis for defining the Center’s research priorities?

7. What are the Center’s strategic planning and priority-setting processes, and how effective are they?

8. How does ISNAR prioritize the demands it receives for assistance to national research programs? Is the regional distribution of ISNAR activities appropriate?

9. How does ISNAR define the major critical research problems in management of the NARS for which ISNAR has a comparative advantage?
10. Are the Center's principal partners in developing countries (e.g., national programs) satisfied with the Center's strategy, and did they have adequate opportunity to contribute to its formulation?

11. What consideration has the Center given to the future nature and scale of its activities in relation to the growing strengths of national research systems?

12. What is the optimal size of ISNAR?

13. Has the Center effectively addressed the management implications of its strategy?

14. What should be the optimal balance between research, service and technical assistance activities of ISNAR?

15. Should ISNAR help the donor community explore more effective means of coordinating financial efforts to develop the capacity of NARS to fulfil the functions contemplated in the TAC vision of the CGIAR System? What should be the link between ISNAR and donor groups such as SPAAR?

16. Does the Center's strategy sufficiently take into account the determinants of sustainable food production and the alleviation of poverty?

17. What mechanisms does the Center employ to ensure equal recognition of the role of men and women in agricultural research and access to its products?

18. What have been the achievements and impact of ISNAR? To what extent has ISNAR been able to influence policy reforms to strengthen national research programs?

19. To what extent does the need to demonstrate impact distort the Center's strategy and its research priorities?

20. How well is the Center's strategy reflected in its current programs? Are the approaches adopted by the programs the most appropriate for the problems addressed?

21. By what means does the Center determine priorities when faced with budgetary constraints? If the Center were to face severe budgetary constraints for the next five years, which activities should be accorded highest and which lowest priority?
D. Center Guidance, Values and Culture

22. Is the Center's legal status appropriate for carrying out its mission successfully?

23. How effective is the Board in policy formulation and oversight?

24. Does the Board (or a Board committee) evaluate the performance of the Director General on a regular basis?

25. How effective is the Board in managing its business (member selection and development, Board and committee leadership, meetings' management, Board procedures, etc.)?

26. Is the relationship between the Board and management healthy?

27. How effectively has the Center been led by the Director General and his or her management team since the last external review? How well do senior managers work as a team?

28. What principal guiding values/philosophies appear to shape the actions of the Board, Management and staff? Are they conducive to high performance? (Among others, consider attitudes towards creativity, accountability, efficiency and organizational change.)

29. What are the main features of the Center's current organizational culture? Do aspects of this culture serve as barriers to performance? How well do the Center’s strategy, structure and management practices fit its organizational culture?

30. Do staff feel they can openly voice criticism to the Director General and Senior Management on internal policy matters? Do staff feel that their voices will be heard and opinions seriously considered?

E. Program Organization and Management

31. Has the Center developed an organizational structure suited to good program performance? What coordination mechanisms are in place? Are they effective? Are there alternative structures that could serve the Center better in the future in the light of the Center's program strategy?

32. How effectively are regional programs linked to the headquarters?
33. What processes does the Center have in place to ensure that feedback from research in the region(s) influences the formulation of its central programs?

34. Is there a need for greater consolidation or decentralization of the research programs?

35. Is the current/planned disciplinary balance appropriate given the Center's research aims?

36. How effective has the Center been in exploiting the concept of "critical mass", both at headquarters and in the regions?

37. How effective is operational planning? How well is program planning linked to budgeting?

38. What monitoring and review systems are in place? Are these effective?

39. To what extent is the peer review mechanism used by the Center?

40. Do the qualifications of the international research staff match those expected for staff at this level? To what extent have the research staff published in refereed journals during the last five years?

41. Do staff work effectively in teams? Do the structure and operating procedures of work groups facilitate cooperation and teamwork?

42. To what extent have research staff been involved in the Center's training and collaborative activities?

43. How effectively are individual programs and units managed?

F. Resources and Facilities

44. Are the overall resources available to the Center appropriate? Is there a case for increasing them? Could they be reduced without seriously affecting the Center's potential for impact?

45. How effective is the management, staffing and organization of the Center's human resource, finance, administrative and information service units?
F.i. Human Resources

46. Are personnel policies for international and local staff stationed at and outside of the headquarters appropriate? Are they seen to be fair and consistent? (Consider policies for staff recruitment, orientation, compensation, performance planning and assessment, career development, tenure, spouse employment, retirement, etc.)

47. Has the Center been able to attract and retain international and local staff of the highest calibre? Is the turnover rate one that ensures program continuity as well as a healthy infusion of new staff into programs?

48. Does the Center actively promote recruitment, retention and career development of women? Are there barriers to women's advancement in the Center?

49. How successful are managers and supervisors in managing people? In particular, how skillful are they in planning, coordinating and delegating work; communicating effectively; and motivating, developing and rewarding staff?

50. How satisfied are staff at all levels with their jobs? How are morale, trust, communication and teamwork perceived among the staff?

F.ii. Finance

51. How successful has the Center been in securing funds to finance its activities? How stable is the Center's funding base? Does the Center have a fund-raising strategy, and how effectively is the fund-raising process managed?

52. Does the proportion of the Center's budget received as restricted funding distort the priorities accorded to its various activities?

53. How effective are the mechanisms and processes used for financial management of headquarters and field operations? (Consider financial planning, analysis, reporting and control, accounting, budgeting, internal and external auditing, and cash and currency management.)

54. How strongly is financial management linked with program management? How much financial responsibility do scientists have?
F.iii. Administration

55. How successful has the Center been in establishing an administrative infrastructure that meets the needs of staff in an efficient manner?

56. How cost effective are the systems and policies used for managing the Center’s:
   - property (maintenance, development, construction);
   - general services (security, housing and dormitories, food services, transport, travel services);
   - procurement (foreign and local purchasing, receiving, stores), and
   - insurance?

F.iv. Information

57. How effectively are information services and technology managed? (Consider computerization, telecommunications, records management, archives, library and documentation.) Are plans concerning information services and technology integrated into the Center’s strategic plan?

58. How successful is the Center in acquiring, generating and managing the information it needs for decision making, communication and integration of activities?

G. External Relationships

59. How successful has the Center been in managing its relations with:
   - clients in developing countries;
   - institutions in the host country or countries in which it operates;
   - other research institutions in developed and developing countries (including CGIAR Centers);
   - donors, the CGIAR and TAC;
   - the media and the general public?

60. Should ISNAR develop a closer relationship with IFPRI?
61. What is the optimal allocation of responsibilities between ISNAR and FAO with respect to servicing national research systems? How can ISNAR best share responsibilities with other regional/sub-regional organizations dealing with research management and policy?

62. Should ISNAR play a more active role in involving universities in national agricultural research activities?

63. Is the Center's strategy for collaboration with national research systems appropriate considering the sizes and stages of development of the collaborating national systems? Does the Center have an active policy of sharing international responsibilities with them?

64. How does the Center ensure that collaborative activities with its host country remain in balance with other demands on its resources?

65. Does the Center have adequate strategies for keeping abreast of new opportunities arising from advancements in science and technology?

H. Achievement and Impact

66. How effectively has the Center realized the objectives it had set for itself since the previous review?

67. What benefits have developing countries derived from the Center's research programs during the period under review? What potential benefits are in the pipeline?

68. How successful has the Center's training program been in responding to the needs of the countries it serves?

69. How effectively do the Center's information services meet the needs of national agricultural research systems?
APPENDIX III

LIST OF INSTITUTIONS VISITED AND INDIVIDUALS MET BY THE REVIEW PANEL

1. AFRICA

Kenya - 16-20/6/91

Ministry of Agriculture
Dr. M.W. Oggema, Deputy Director, Agriculture Research Extension
Liaison Mr. B.N. Kisilu, Deputy Secretary, Ministry of Agriculture
Mr. J.R. Gatheru, Deputy Director, Agricultural Extension

Ministry of Research, Science and Technology
Mr. R.L. Ole Odupoy, Deputy Secretary

Kenyan Agricultural Research Institute (KARI)
Dr. C.G. Ndiritu, Director
Mr. J.K. Ruto, Deputy Director (Crops, Soils and Water)
Dr. J.D. Wachira, Deputy Director (Livestock)
Mr. J. Miyogo, Deputy Director (Finance and Administration)
Ms. L.W. Kimani, Assistant Director (Training)
Ms. M.N. Wabule, Assistant Director (Horticulture)
Mr. A.O.G.O. Okech, Assistant Director (Socioeconomics)
Dr. A. Mailu, Assistant Director (Crops and Database)
Dr. B. Ngundo, Assistant Director (Soils)
Dr. A.N. Abate, Assistant Director (Animal Production)

Katumani Dryland Research Centre
Dr. B. Wafula, Director

Ministry of Livestock
Hon. J.J.M. Nyagah, Minister for Livestock Development
Hon. Dr. N.M. Wekesa, Assistant Minister
Hon. Mr. Peter Nang’ole, Assistant Minister
Mr. S.S. Lesrima, Permanent Secretary
Dr. W.K. Toroichich Chang, CVIO, Kabete Veterinary Laboratories
Mr. A.M. Mutai, Director of Livestock Production, MLD
Dr. O.F.G. Ohuoch, Assistant Director of Veterinary Services

ICIPE
Mr. W. Wapakala, Station Manager, Mbita Pt. Field Station

Egerton University
Dr. P.K. Karau, Dean, Faculty of Agriculture
European Commission
Mr. P. Ceuppens, EC Delegation, Eastern Africa

World Bank
Dr. E.C. Quisumbing, Senior Operations Officer, Regional Mission

ILRAD
Dr. A.R. Gray, Director General
Dr. A.S. Young, Head, Tick Unit
Dr. O.M. Toure, Head, Cooperative Programs, Training and Information

Other International Research Agencies
Dr. F.A. Attere, IBPGR Regional Coordinator for Eastern and Southern Africa
Dr. S. Nganga, CIP Regional Officer
Dr. P. Anandajeyasekeram, CIMMYT Regional Liaison Officer
Dr. G. D'Ieteren, ILCA Team Leader
Dr. Z.T. Dabrowski, Acting Head, Institution Building and Interactive Research Unit, ICIPE

UNDP
Mr. L. Ngutter, Programme Officer

FAO
Mr. B. Rufuells, Programme Officer

University of Nairobi
Dr. N.K.R. Musimba, Senior Research Fellow and Manager, Kibwezi Dryland Field Station
Dr. T. Njoka, Chairman and Senior Lecturer, Department of Range Management
Prof. D. Oduor-Okelo, Principal, College of Agriculture and Veterinary Sciences

ODA
Mr. G. Gilman, Natural Resources Advisor
Dr. T.J. Irvin, Senior Animal Health Advisor

Tanzania - 20-21/06/91

Department of Research and Training (DRT), Ministry of Agriculture and Livestock Development and Cooperatives (MALDC), Dar es Salaam
Dr. G. Sempeho, NARLM Coordinator and Head, Planning and Evaluation Unit
Dr. F. Shao, Assistant Commissioner, Crops Research
Mr. M.M.S. Lujenga, Acting Assistant Commissioner, Livestock Research
Mr. E.L. Ngatunga, Assistant Commissioner, Support Services
Mr. K.D. Brown, Organization and Management Team Leader
FAO
Mr. R. Fuller, FAO Representative in Tanzania

GTZ
Mr. R. Mutschler, Head, GTZ-PAS Office

World Bank
Dr. R. Southworth, Senior Operations Officer

MALDC
Mr. W. Ngirwa, Acting Principal Secretary
Mr. P.M. Lyimo, Assistant Commissioner (Planning), Department of Planning and Marketing

Burkina Faso - 8-11/06/91

INERA
M. R. Zangré, Chef du CRAF de Kamboisé
M. V. Hien, Chef, par intérim, du Programme ESFIMA
M. A. Birba, Comptable PRA
M. J.-M. Ouedraogo, Chef Comptable
Dr. A.J. Nianogo, Chef du Programme Productions Animales
Mme. C. Dabiré, Chef du Programme Oléagineux Annuels et Légumineuses à graines
M. M. Yaguibou, Responsable des Equipements (BAT)
M. P.C. Bélem, Directeur INERA
M. L. Somé, Chef Division des Programmes de Recherche
M. S.J.-B. Taonda, Chef du Programme RSP

CNRST
M. M. Sédogo, Directeur Général
M. S. Paco, Director of International Cooperation

Ministry of Higher Education and Scientific Research
Dr. M. Nacro, Minister

Ministry of Agriculture and Animal Husbandry
Dr. A. Djigma, Minister

Extension
M. N. Ibrahim, Directeur de la Vulgarisation Agricole

USAID
Dr. D.B. McCarthy, Agricultural Officer
FAO
M. B. Nadity
M. T. Kasim

World Bank
M. Leduc, Research and Extension Project Officer
M. B. Célestin, Economist

CIRAD
M. R. Nicou, Délégué du CIRAD

IDR
M. B. Amidou

ORSTOM
M. B. Huguenin, Research Management Advisor to Director of INERA

Private Sector
M. Kambiré, Former Permanent Secretary of the Ministry of Agriculture

SAFGRAD
Dr. J. Meyonga, Program Coordinator
Dr. B. Taye, Scientific Director

Ghana - 13-15/06/91

CSIR
Dr. R.G.J. Butler, Director General

Local Members of Review Teams Appointed by Council for Scientific and Industrial Research
Mr. F.W. Addo-Ashong, Consultant, EFFICONSULT
Mr. T.O. Sunkwa-Mills, Consultant
Mr. E.A. Addison, Director, Crops Research Institute
Mr. S.V. Adu, Consultant
Mr. K. Poku, Consultant
Mr. D.C. Asante-Kwatia, Consultant, Faculty of Agriculture U.S.T.
Mr. J.A. Villars, Coordinator, GHASTINET - CSIR
Ms. E. Odartei-Laryea, Principal Assistant Secretary, CSIR
Mr. K.A. Haizel, Deputy Director General, CSIR

Ministry of Agriculture
Mr. A.D. Asare, Acting Deputy Director, Ministry of Agriculture
Ms. R. Tetebo, Acting Deputy Director, Women in Agriculture & Development of Department, Extension Services
Mr. F. Donkor, Deputy Director, Extension Services
Mr. A. Mosi, Deputy Director, Animal Health & Production Department
Appendix III - page 5

Mr. O.K. Gyarteng, Director, Agricultural Engineering Services Department
Dr. J.K. Taylor, Acting Director, Animal Health and Production Department
Mr. F.M.K. Denyoh, Acting Director, Fisheries Department
Dr. S.K. Dapaah, Director, Policy Planning, Monitoring & Evaluation
Mr. G.A. Dixon, Acting Director, Crop Services Department
Mr. N.V. Dowuona, Chief Director (Technical)

CIDA
Dr. R. Odette

Ministry of Industries, Science & Technology
Dr. J.K.B.A. Ata, Technical Director
Captain K.A. Butah, Secretary for Industries, Science & Technology

Ministry of Agriculture
Commodore S. Obimpeh, Secretary for Agriculture

University of Ghana, Legon
Dr. B.K. Ahunu, Dean, Faculty of Agriculture
Dr. K.A. Oduro, Senior Lecturer, Department of Crop Science
Dr. F.K. Fianu, Senior Lecturer, Department of Animal Science
Dr. F.Y.M. Fiadjoe, Lecturer, Agricultural Extension
Mr. M. Seidu, Senior Lecturer, Agricultural Engineering
Mr. S.G.K. Adiku, Lecturer, Department of Soil Science

FAQ
Dr. M. Okai, Regional Agricultural Planning Economist

The World Bank
Dr. T.H. Mariam, Senior Agricultural Economist (Accra)
Dr. I. Hill, Senior Agriculturalist (Washington, D.C.)
Dr. Hong, Agricultural Extension Specialist (Accra)

CIMMYT
Dr. R. Soza, CIMMYT Joint Coordinator (Kumasi)

2. ASIA

Indonesia - 6-11/06/91

Agency for Agricultural Research and Development (AARD)
Dr. S. Hadiwigeno, Director General
Dr. J. Budianto, Director, Center for Agricultural Research Planning (CARP)
Dr. S. Putro, Project Leader, Agricultural Research Management Project
Dr. Sridodo, Project Leader, Applied Agricultural Research Project
AARD - Management Information Services Team
Ir. Murdiyono, Head, MIS Unit
Dr. B. Notoatmodjo, Foreign Cooperation
Dr. E. Abdurachman, Monitoring and Evaluation
Ir. Sumarsini, Personnel
Dr. I.S. Setiyo Utomo, Physical Facilities
Mr. D. Supriadi, Finance

AARD Advisory Committee - Priority Setting
Dr. S. Hadiwigeno, Director General
Dr. J. Budianto, Head, CARP
Dr. E. Abdurachman, Monitoring and Evaluation
Dr. E. Pasandaran, Director, CASER
Dr. Darwis, Director, Industrial Crops
Dr. N. Sutrisno, Animal Sciences
Dr. Sitorus, Animal Sciences
Dr. I. Manwan, Director, Food Crops
Dr. T. Subagyo, Estate Crops
Dr. A. Suayana, Bureau of Planning
Dr. T. Saedjaan, Director, Animal Sciences
Dr. P. Tijtropranto, Director National Agricultural Library and Documentation Center
Dr. R. Rachman, BAPPENAS
Dr. Hermanto, CASER
Mr. S. Bahri, CASER
Mr. P. Widjaja, CASER
Dr. R. Ocherse, ARMP Consultant
Mr. Sarwono, ARMP Consultant
Dr. B. Notoatmodjo, Foreign Cooperation
Dr. B. Priono, Fisheries
Ir. Endang, CARP
Dr. Roosmani, CARP
Dr. Budiman, CARP
Ms. W. Eveleens, ISNAR
Dr. S. Wood, ISNAR
Dr. D. Wood, ISNAR

Ministry of Agriculture
Dr. S. Baharajah, Junior Minister

FAO
Ms. S.F. Nielsen, Programme Officer

ADB
Mr. R.M Bradley, Chief
USAID
Mr. M.L. Winter, Chief, Office of Agriculture and Rural Development
Mr. J.D. Lindborg, Private Sector Officer
Mr. M.M. Tajib, Applied Agricultural Research Project Activity Officer

IRRI
Dr. C. Mamaril, IRRI-AARD Liaison Scientist

AARD/ISNAR
Dr. S. Sadikin, Former Director General AARD, Former Member of
ISNAR Board of Trustees

World Bank
Ms. C.T. Jarvis, Senior Agricultural Economist (Jakarta)
Dr. P. Tamboli, Agricultural Research Management Project Officer (Washington,
D.C.)

Sri Lanka - 12-14/6/91

Center for Agricultural Research Policy (CARP), Colombo
Dr. D.T. Wettasinghe, Executive Secretary
Ms. A. Basnayake, MIS Coordinator
Dr. C.R. Panabokke, Former Deputy Director (Research), Department of	Agriculture, CARP Council Member

Ministry of Finance, Colombo
Dr. F. Mohideen, Director of Planning, CARP Council Member

Coconut Research Institute, Lunuwile
Dr. R. Mahindapale, Director
Dr. M. Jeganathan, Senior Scientist
Mr. T.S.G. Peiris, Biometrician

University of Peradeniya
Dr. Y.D.A. Senanayake, Director, Postgraduate Institute of Agriculture
Dr. H.P.M. Gunasena, Dean, Faculty of Agriculture, CARP Council Member

Department of Agriculture
Dr. S.P.R. Weerasinghe, Director, CARP Council Member
Dr. S.L. Amarasiri, Deputy Director (Research)
Mr. G.A.P.T. Gunawardena, Planning Cell

Veterinary Research Institute
Dr. M.C.L. de Alwis, Director
Dr. S.S.E. Ranawana, Senior Scientist
3. LATIN AMERICA

Uruguay - 24-25/6/91

Instituto Nacional de Investigación Agropecuaria (INIA)
Dr. C. Delpiazzo, Minister of Health, and INIA’S Legal Adviser
Dr. A. Rabuffetti, National Director, INIA
Ing. J.M. Otegui, INIA Board President
Ing. M. Abreu, INIA Board Member
Ing. R. Symonds, INIA Board Member
Sr. J.P. Hounie, INIA Board Member
Dr. A. Veras, IICA Representative - Uruguay

INIA Staff
Ing. J. Grierson
Ing. G. Ferreira
Ing. J. Silva
Ing. M. Allegri
Dr. G. Cerizola
Dr. E. Indarte

Other NARS leaders
Sr. F. Terra, Former Senator of the Republic of Uruguay
Ing. A. Fossatti, Advisor to the Minister of Livestock, Agriculture and Fisheries
Ing. P. Bonino, Former Minister of Livestock, Agriculture and Fisheries

Costa Rica - 27-28/06/91

NARS Leaders
Dr. J.M. Figueres, Former Minister of Agriculture
Dr. A. Vasques, Former Director of Agriculture, MAG
Dr. M. Gonzalez, Former Dean of Agriculture, University of Costa Rica

Dr. J.P. Sanchez, Director, Central American School of Livestock
Dr. R. Alfaro, Former Director of Research and Extension, MAG
Ing. H. Urena, Former Director of Agriculture, MAG
Ing. R. Mesa, Former and Current Director of Planning, MAG
Ing. E. Garcia, Former Director of Planning, MAG and Director for Agriculture, Ministry of Planning
Ing. J. Ruiz, Former Director of Research Station Los Diamontes (MAG)
CONITTA Executive Committee
Dr. F. Mojica, Former Dean of Agriculture, National University
Dr. M. Chavez, Director of Research and Extension, Sugarcane Board
Ing. O. Bonilla, Representative, University for Distance Training
Ing. J. Hernandez, Director of Agriculture, MAG
Ing. L. Zamora, Representative, National Institute for Learning
Ing. H. Queseda, Secretary for CONITTA

Ministry of Agriculture & Livestock
Sr. J.R. Lizano, Minister
Ing. J. Hernandez, Director of Agriculture
Ing. R. Mesa, Director of Planning

Ministry, Research and Extension Leaders
Ing. E.I. Vargas, Deputy Director of Research & Extension
Ing. M. Rodriguez, Deputy Director of Crop Research
Ing. J.M. Carrillo, Director of Research Station Los Diamantes
Ing. H. Queseda, Assistant to Director of Agriculture
Ing. R. Oviedo, Coordinator for World Bank Project
Ing. R. Mesa, Director of Planning
Ing. G. Soliz, Deputy Director of Extension at MAG

Other NARS Leaders
Dr. O. Fonseca, Deputy Director of CATIE
Dr. L.C. Gonzalez, Director of Agricultural Program, Costa Rican Coalition of Initiatives for Development (CINDE - private sector)
Dr. R. Alfaro, MAG/UAW, Former Director of Research & Extension (MAG)

Ing. O. Ramirez, President, School of Agricultural Engineers
Ing. A. Vargas, Former Director of Agriculture
Ing. A. Vasquez, Former Director of Agriculture

IICA
Dr. M. Piñeiro, Director General
Dr. E. Trigo, Director, Program for Generation and Transfer of Agricultural Technology (Programa II)
Dr. E. Lindarte, Specialist, Programa II
Dr. D. Kaimowitz, Specialist, Programa II
Dr. H. Morales, IICA Representative for Costa Rica

4. EUROPE

FAO Headquarters Rome 17/06/91
Dr. H. de Haen, Assistant Director General, Agriculture Department
Dr. M.S. Zehni, Director, Research and Technology Development Division
Dr. F. Ng, Chief, Forest Research, Education and Training Branch
APPENDIX IV

ASSESSMENT OF ISNAR SERVICES AND PERCEPTIONS ABOUT FUTURE PRIORITY: SURVEY OF NARS LEADERS

A brief survey questionnaire was developed, translated into French and Spanish from the original English, and mailed to 90 NARS leaders at the outset of this Review. Thirty-seven responses were received in time for the present Review, including six from LAC, six from WANA, 15 from sub-Saharan Africa, nine from Asia, and one response which did not specify the region of origin. The relatively low response was due in large part to the short response time and the slowness of mail service to and within many countries. Although detailed data were collected on each respondent (e.g., region, position, size of organization), detailed analysis by subgroups was not carried out on most items because of the small number of respondents. However, the views of NARS leaders regarding the future importance of different management problems have been categorized by region.

Tables 1-3 analyze the past performance of ISNAR from 1986-90 in terms of the number of services or activities received across different management factors, including ISNAR’s Critical Factors. Table 1 shows the number of advisory services, research activities, training events, and publications that have been received by the responding NARS across 18 different factors. Table 2 assesses the perceived value of these activities by the responding NARS leaders, and Table 3 gives a general assessment of the resulting change. Each table is organized in rank order of the 18 factors in terms of perceived value (Table 2) and changes (Table 3) that have resulted due to ISNAR’s input.

It appears that ISNAR services are, for the most part, highly valued and have resulted in some organizational change for those institutions receiving them. Obviously, for a number of these management areas, it is too early to assess fully the impact of ISNAR’s recent research activities, since management tool development is still underway. However, in the meantime, the advice of the experienced advisory staff appears to be highly valued and, for those NARS who receive this input, it appears to be having a positive impact across many areas of agricultural research management.

The second half of the analysis deals with the future importance that NARS leaders give to different management problems and the type of services they believe merit priority. Table 4 organizes these various management factors in rank order of future importance, with the relative importance of each of type of service or activity (advisory, research, training, and publications) being further ranked for each factor. Table 5 organizes this same information by type of service or activity, and then ranks each management factor in order of importance within the four service categories. Table 6 provides an additional ranking of these problems, with the responses categorized by regions.
These perceptions of NARS leaders are based on a limited sample and, therefore, should be interpreted with some caution. However, they do represent an independent assessment of what 37 NARS leaders think about ISNAR's work and its future priorities. The panel has taken note of these findings and used the results, or insights gained, in various sections of the report. Also, the panel has carefully read and in some cases used the written responses to three open-ended questions included in the questionnaire. Therefore, ISNAR should treat these findings as an additional source of input into its program planning and priority-setting process.
Table 1. Number of ISNAR Services Received by Responding NARS Leaders, Organized by Management Factor in rank Order of Services Received

<table>
<thead>
<tr>
<th>Management factor</th>
<th>Advisory</th>
<th>Research</th>
<th>Training</th>
<th>Publications</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategic planning</td>
<td>15</td>
<td>2</td>
<td>10</td>
<td>8</td>
<td>35</td>
</tr>
<tr>
<td>Planning/priority setting</td>
<td>10</td>
<td>2</td>
<td>9</td>
<td>12</td>
<td>33</td>
</tr>
<tr>
<td>Constraint diagnosis</td>
<td>12</td>
<td>3</td>
<td>5</td>
<td>11</td>
<td>31</td>
</tr>
<tr>
<td>Structure &amp; organization</td>
<td>16</td>
<td>1</td>
<td>4</td>
<td>10</td>
<td>31</td>
</tr>
<tr>
<td>Resource allocation/budgeting</td>
<td>11</td>
<td>3</td>
<td>9</td>
<td>5</td>
<td>28</td>
</tr>
<tr>
<td>Links with technology transfer</td>
<td>7</td>
<td>2</td>
<td>6</td>
<td>8</td>
<td>23</td>
</tr>
<tr>
<td>In-service training</td>
<td>3</td>
<td>3</td>
<td>11</td>
<td>5</td>
<td>22</td>
</tr>
<tr>
<td>Monitoring &amp; evaluation</td>
<td>4</td>
<td>3</td>
<td>6</td>
<td>9</td>
<td>22</td>
</tr>
<tr>
<td>Links with external knowledge</td>
<td>7</td>
<td>0</td>
<td>5</td>
<td>8</td>
<td>20</td>
</tr>
<tr>
<td>Formulating policy</td>
<td>8</td>
<td>1</td>
<td>4</td>
<td>6</td>
<td>19</td>
</tr>
<tr>
<td>Links with policy</td>
<td>5</td>
<td>0</td>
<td>6</td>
<td>7</td>
<td>18</td>
</tr>
<tr>
<td>MIS</td>
<td>3</td>
<td>2</td>
<td>10</td>
<td>3</td>
<td>18</td>
</tr>
<tr>
<td>Reward &amp; incentive</td>
<td>5</td>
<td>2</td>
<td>5</td>
<td>4</td>
<td>16</td>
</tr>
<tr>
<td>Personnel management</td>
<td>3</td>
<td>0</td>
<td>4</td>
<td>5</td>
<td>12</td>
</tr>
<tr>
<td>Library/information</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>5</td>
<td>11</td>
</tr>
<tr>
<td>Donor links</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>Financial resources</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Physical resources</td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>116</td>
<td>26</td>
<td>101</td>
<td>114</td>
<td>357</td>
</tr>
</tbody>
</table>

n = 37
Table 2. Perceived Value of ISNAR Services

<table>
<thead>
<tr>
<th>Management factor</th>
<th>Average</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning/priority setting</td>
<td>1.52</td>
<td>0.66</td>
</tr>
<tr>
<td>Strategic planning</td>
<td>1.55</td>
<td>0.80</td>
</tr>
<tr>
<td>Constraint diagnosis</td>
<td>1.62</td>
<td>0.85</td>
</tr>
<tr>
<td>Links with technology transfer</td>
<td>1.64</td>
<td>0.81</td>
</tr>
<tr>
<td>Structure &amp; organization</td>
<td>1.81</td>
<td>0.73</td>
</tr>
<tr>
<td>MIS</td>
<td>1.86</td>
<td>0.99</td>
</tr>
<tr>
<td>Formulating policy</td>
<td>1.90</td>
<td>0.70</td>
</tr>
<tr>
<td>Links with policy</td>
<td>1.93</td>
<td>0.88</td>
</tr>
<tr>
<td>Resource allocation/budgeting</td>
<td>1.94</td>
<td>0.85</td>
</tr>
<tr>
<td>In-service training</td>
<td>2.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Physical resources</td>
<td>2.00</td>
<td>0.71</td>
</tr>
<tr>
<td>Library/information</td>
<td>2.00</td>
<td>0.87</td>
</tr>
<tr>
<td>Links with external knowledge</td>
<td>2.07</td>
<td>0.80</td>
</tr>
<tr>
<td>Personnel management</td>
<td>2.20</td>
<td>1.17</td>
</tr>
<tr>
<td>Donor links</td>
<td>2.40</td>
<td>0.80</td>
</tr>
<tr>
<td>Monitoring &amp; evaluation</td>
<td>2.50</td>
<td>1.05</td>
</tr>
<tr>
<td>Financial resources</td>
<td>2.67</td>
<td>0.94</td>
</tr>
<tr>
<td>Reward &amp; incentive</td>
<td>2.71</td>
<td>0.45</td>
</tr>
</tbody>
</table>

Note: Both assessments are based on a 5-point scale, where 1 = extremely valuable under "perceived value," and 1 = major change under "resulting changes."

Table 3. Resulting Changes due to ISNAR Inputs

<table>
<thead>
<tr>
<th>Management factor</th>
<th>Average</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constraint diagnosis</td>
<td>2.36</td>
<td>1.26</td>
</tr>
<tr>
<td>Planning/priority setting</td>
<td>2.55</td>
<td>1.03</td>
</tr>
<tr>
<td>In-service training</td>
<td>2.67</td>
<td>1.03</td>
</tr>
<tr>
<td>Strategic planning</td>
<td>2.67</td>
<td>1.21</td>
</tr>
<tr>
<td>Structure &amp; organization</td>
<td>2.74</td>
<td>1.48</td>
</tr>
<tr>
<td>Links with technology transfer</td>
<td>2.79</td>
<td>1.21</td>
</tr>
<tr>
<td>Formulating policy</td>
<td>2.91</td>
<td>1.31</td>
</tr>
<tr>
<td>Library/information</td>
<td>3.00</td>
<td>1.33</td>
</tr>
<tr>
<td>Resource allocation/budgeting</td>
<td>3.11</td>
<td>1.29</td>
</tr>
<tr>
<td>Links with policy</td>
<td>3.13</td>
<td>1.26</td>
</tr>
<tr>
<td>MIS</td>
<td>3.13</td>
<td>1.31</td>
</tr>
<tr>
<td>Links with external knowledge</td>
<td>3.13</td>
<td>1.09</td>
</tr>
<tr>
<td>Donor links</td>
<td>3.14</td>
<td>1.25</td>
</tr>
<tr>
<td>Personnel management</td>
<td>3.33</td>
<td>1.70</td>
</tr>
<tr>
<td>Financial resources</td>
<td>3.50</td>
<td>1.50</td>
</tr>
<tr>
<td>Monitoring &amp; evaluation</td>
<td>3.63</td>
<td>1.32</td>
</tr>
<tr>
<td>Reward &amp; incentive</td>
<td>3.86</td>
<td>1.25</td>
</tr>
<tr>
<td>Physical resources</td>
<td>4.60</td>
<td>0.80</td>
</tr>
</tbody>
</table>
Table 4. Relative Importance of Different Management Factors and Type of ISNAR ServicesPreferred: Perceptions of NARS Leaders

<table>
<thead>
<tr>
<th>Management Factor</th>
<th>Problem Importance</th>
<th>Advisory Service</th>
<th>Research</th>
<th>Training</th>
<th>Publications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning/priority setting</td>
<td>1.55</td>
<td>2.27</td>
<td>2.67</td>
<td>2.27</td>
<td>3.46</td>
</tr>
<tr>
<td>Strategic planning</td>
<td>1.65</td>
<td>2.23</td>
<td>2.61</td>
<td>2.31</td>
<td>3.49</td>
</tr>
<tr>
<td>Resource allocation/budgeting</td>
<td>1.78</td>
<td>2.66</td>
<td>2.61</td>
<td>1.92</td>
<td>3.67</td>
</tr>
<tr>
<td>Formulating policy</td>
<td>1.83</td>
<td>2.20</td>
<td>3.09</td>
<td>2.29</td>
<td>3.20</td>
</tr>
<tr>
<td>Monitoring &amp; evaluation</td>
<td>1.86</td>
<td>2.79</td>
<td>2.92</td>
<td>1.92</td>
<td>3.09</td>
</tr>
<tr>
<td>Reward &amp; incentive</td>
<td>1.86</td>
<td>2.31</td>
<td>2.57</td>
<td>2.61</td>
<td>3.02</td>
</tr>
<tr>
<td>In-service training</td>
<td>1.86</td>
<td>2.78</td>
<td>3.23</td>
<td>2.14</td>
<td>3.17</td>
</tr>
<tr>
<td>Links with technology transfer</td>
<td>1.94</td>
<td>2.32</td>
<td>2.69</td>
<td>2.75</td>
<td>3.38</td>
</tr>
<tr>
<td>MIS</td>
<td>2.03</td>
<td>2.81</td>
<td>2.61</td>
<td>2.23</td>
<td>3.87</td>
</tr>
<tr>
<td>Structure &amp; organization</td>
<td>2.14</td>
<td>2.42</td>
<td>3.44</td>
<td>3.19</td>
<td>3.20</td>
</tr>
<tr>
<td>Links with policy</td>
<td>2.22</td>
<td>1.98</td>
<td>3.08</td>
<td>2.34</td>
<td>3.75</td>
</tr>
<tr>
<td>Library/information</td>
<td>2.27</td>
<td>2.60</td>
<td>3.61</td>
<td>2.40</td>
<td>2.92</td>
</tr>
<tr>
<td>Personnel management</td>
<td>2.31</td>
<td>2.37</td>
<td>2.95</td>
<td>2.87</td>
<td>3.05</td>
</tr>
<tr>
<td>Donor links</td>
<td>2.37</td>
<td>2.30</td>
<td>2.75</td>
<td>2.32</td>
<td>3.75</td>
</tr>
<tr>
<td>Constraint diagnosis</td>
<td>2.53</td>
<td>2.71</td>
<td>3.23</td>
<td>2.50</td>
<td>3.33</td>
</tr>
<tr>
<td>Physical resources</td>
<td>2.58</td>
<td>2.35</td>
<td>3.75</td>
<td>3.09</td>
<td>3.75</td>
</tr>
<tr>
<td>Links with external knowledge</td>
<td>2.69</td>
<td>2.50</td>
<td>2.73</td>
<td>2.50</td>
<td>3.44</td>
</tr>
<tr>
<td>Financial resources</td>
<td>2.73</td>
<td>2.57</td>
<td>4.50</td>
<td>2.40</td>
<td>3.75</td>
</tr>
</tbody>
</table>

Note: Factors are presented in rank order (on a scale from 1 to 5, where 1 = very important problem); type of service preferred is based on a scale from 1 to 5, where 1 is the highest ranking. The type of service given highest preference by NARS leaders is in parenthesis.
Table 5. Future priority of different management factors organized by type of service or activity, in rank order

<table>
<thead>
<tr>
<th>Advisory</th>
<th>Average</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Links with policy</td>
<td>1.98</td>
<td>0.88</td>
</tr>
<tr>
<td>Strategic planning</td>
<td>2.23</td>
<td>0.97</td>
</tr>
<tr>
<td>Planning/priority setting</td>
<td>2.27</td>
<td>0.72</td>
</tr>
<tr>
<td>Formulating policy</td>
<td>2.28</td>
<td>1.25</td>
</tr>
<tr>
<td>Donor links</td>
<td>2.30</td>
<td>1.04</td>
</tr>
<tr>
<td>Reward &amp; incentive</td>
<td>2.31</td>
<td>0.94</td>
</tr>
<tr>
<td>Links with technology transfer</td>
<td>2.32</td>
<td>0.87</td>
</tr>
<tr>
<td>Physical resources</td>
<td>2.35</td>
<td>0.89</td>
</tr>
<tr>
<td>Personnel management</td>
<td>2.37</td>
<td>0.84</td>
</tr>
<tr>
<td>Structure &amp; organization</td>
<td>2.42</td>
<td>1.07</td>
</tr>
<tr>
<td>Links with external knowledge</td>
<td>2.50</td>
<td>1.07</td>
</tr>
<tr>
<td>Financial resources</td>
<td>2.57</td>
<td>0.64</td>
</tr>
<tr>
<td>Library/Information</td>
<td>2.60</td>
<td>1.19</td>
</tr>
<tr>
<td>Resource allocation/budgeting</td>
<td>2.66</td>
<td>0.98</td>
</tr>
<tr>
<td>Constraint diagnosis</td>
<td>2.71</td>
<td>1.18</td>
</tr>
<tr>
<td>In-service training</td>
<td>2.78</td>
<td>0.98</td>
</tr>
<tr>
<td>Monitoring &amp; evaluation</td>
<td>2.79</td>
<td>1.11</td>
</tr>
<tr>
<td>MS</td>
<td>2.81</td>
<td>1.04</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Training</th>
<th>Average</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monitoring &amp; evaluation</td>
<td>1.92</td>
<td>0.71</td>
</tr>
<tr>
<td>Resource allocation/budgeting</td>
<td>1.92</td>
<td>0.79</td>
</tr>
<tr>
<td>In-service training</td>
<td>2.14</td>
<td>1.05</td>
</tr>
<tr>
<td>MIS</td>
<td>2.23</td>
<td>0.92</td>
</tr>
<tr>
<td>Planning/priority setting</td>
<td>2.27</td>
<td>0.81</td>
</tr>
<tr>
<td>Formulating policy</td>
<td>2.29</td>
<td>0.75</td>
</tr>
<tr>
<td>Strategic planning</td>
<td>2.31</td>
<td>0.83</td>
</tr>
<tr>
<td>Donor links</td>
<td>2.32</td>
<td>0.80</td>
</tr>
<tr>
<td>Links with policy</td>
<td>2.34</td>
<td>0.41</td>
</tr>
<tr>
<td>Financial resources</td>
<td>2.40</td>
<td>1.17</td>
</tr>
<tr>
<td>Library/Information</td>
<td>2.40</td>
<td>0.91</td>
</tr>
<tr>
<td>Constraint Diagnosis</td>
<td>2.50</td>
<td>0.69</td>
</tr>
<tr>
<td>Links with external knowledge</td>
<td>2.50</td>
<td>0.00</td>
</tr>
<tr>
<td>Reward &amp; incentive</td>
<td>2.61</td>
<td>0.99</td>
</tr>
<tr>
<td>Links with technology transfer</td>
<td>2.75</td>
<td>0.85</td>
</tr>
<tr>
<td>Personnel management</td>
<td>2.87</td>
<td>0.83</td>
</tr>
<tr>
<td>Physical resources</td>
<td>3.09</td>
<td>1.31</td>
</tr>
<tr>
<td>Structure &amp; organization</td>
<td>3.19</td>
<td>0.62</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Research</th>
<th>Average</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reward &amp; incentive</td>
<td>2.57</td>
<td>1.14</td>
</tr>
<tr>
<td>Strategic planning</td>
<td>2.61</td>
<td>0.99</td>
</tr>
<tr>
<td>Resource allocation/budgeting</td>
<td>2.61</td>
<td>1.12</td>
</tr>
<tr>
<td>Planning/priority setting</td>
<td>2.67</td>
<td>0.90</td>
</tr>
<tr>
<td>Links with technology transfer</td>
<td>2.69</td>
<td>0.93</td>
</tr>
<tr>
<td>Links with external knowledge</td>
<td>2.73</td>
<td>0.72</td>
</tr>
<tr>
<td>Donor links</td>
<td>2.75</td>
<td>1.09</td>
</tr>
<tr>
<td>MIS</td>
<td>2.81</td>
<td>0.74</td>
</tr>
<tr>
<td>Monitoring &amp; evaluation</td>
<td>2.92</td>
<td>1.09</td>
</tr>
<tr>
<td>Personnel management</td>
<td>2.95</td>
<td>1.22</td>
</tr>
<tr>
<td>Links with policy</td>
<td>3.08</td>
<td>0.90</td>
</tr>
<tr>
<td>Formulating policy</td>
<td>3.09</td>
<td>1.36</td>
</tr>
<tr>
<td>Constraint diagnosis</td>
<td>3.23</td>
<td>1.08</td>
</tr>
<tr>
<td>In-service training</td>
<td>3.23</td>
<td>1.30</td>
</tr>
<tr>
<td>Structure &amp; organization</td>
<td>3.44</td>
<td>0.94</td>
</tr>
<tr>
<td>Library/Information</td>
<td>3.81</td>
<td>0.71</td>
</tr>
<tr>
<td>Physical resources</td>
<td>3.75</td>
<td>0.67</td>
</tr>
<tr>
<td>Financial resources</td>
<td>4.50</td>
<td>0.61</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Publications</th>
<th>Average</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIS</td>
<td>2.87</td>
<td>0.94</td>
</tr>
<tr>
<td>Library/Information</td>
<td>2.92</td>
<td>0.93</td>
</tr>
<tr>
<td>Reward &amp; incentive</td>
<td>3.02</td>
<td>1.08</td>
</tr>
<tr>
<td>Personnel management</td>
<td>3.05</td>
<td>0.99</td>
</tr>
<tr>
<td>Monitoring &amp; evaluation</td>
<td>3.09</td>
<td>0.76</td>
</tr>
<tr>
<td>In-service training</td>
<td>3.17</td>
<td>0.90</td>
</tr>
<tr>
<td>Structure &amp; organization</td>
<td>3.20</td>
<td>1.17</td>
</tr>
<tr>
<td>Formulating policy</td>
<td>3.26</td>
<td>1.03</td>
</tr>
<tr>
<td>Constraint diagnosis</td>
<td>3.33</td>
<td>0.78</td>
</tr>
<tr>
<td>Links with technology transfer</td>
<td>3.38</td>
<td>0.94</td>
</tr>
<tr>
<td>Links with external knowledge</td>
<td>3.44</td>
<td>1.21</td>
</tr>
<tr>
<td>Planning/priority setting</td>
<td>3.46</td>
<td>1.22</td>
</tr>
<tr>
<td>Strategic planning</td>
<td>3.49</td>
<td>1.12</td>
</tr>
<tr>
<td>Resource allocation/budgeting</td>
<td>3.67</td>
<td>0.96</td>
</tr>
<tr>
<td>Donor links</td>
<td>3.75</td>
<td>1.30</td>
</tr>
<tr>
<td>Physical resources</td>
<td>3.75</td>
<td>0.79</td>
</tr>
<tr>
<td>Financial resources</td>
<td>3.75</td>
<td>0.72</td>
</tr>
<tr>
<td>Links with policy</td>
<td>3.75</td>
<td>1.21</td>
</tr>
</tbody>
</table>
Table 6. Relative importance of different management factors and type of ISNAR services preferred: Perceptions of NARS leaders

<table>
<thead>
<tr>
<th>Latin America and the Caribbean (n = 6)</th>
<th>West Asia and North Africa (n = 6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management factor</td>
<td>Problem Importance</td>
</tr>
<tr>
<td></td>
<td>Average</td>
</tr>
<tr>
<td>Strategic planning</td>
<td>1.00</td>
</tr>
<tr>
<td>Planning/priority setting</td>
<td>1.67</td>
</tr>
<tr>
<td>Monitoring &amp; evaluation</td>
<td>1.67</td>
</tr>
<tr>
<td>Resource allocation/budgeting</td>
<td>1.83</td>
</tr>
<tr>
<td>Formulating policy</td>
<td>1.83</td>
</tr>
<tr>
<td>MIS</td>
<td>2.00</td>
</tr>
<tr>
<td>Structure &amp; organization</td>
<td>2.00</td>
</tr>
<tr>
<td>Links with technology transfer</td>
<td>2.33</td>
</tr>
<tr>
<td>In-service training</td>
<td>2.50</td>
</tr>
<tr>
<td>Donor links</td>
<td>2.83</td>
</tr>
<tr>
<td>Constraint diagnosis</td>
<td>3.00</td>
</tr>
<tr>
<td>Library/Information</td>
<td>3.00</td>
</tr>
<tr>
<td>Personnel management</td>
<td>3.17</td>
</tr>
<tr>
<td>Reward &amp; incentive</td>
<td>3.17</td>
</tr>
<tr>
<td>Links with external knowledge</td>
<td>3.33</td>
</tr>
<tr>
<td>Physical resources</td>
<td>3.67</td>
</tr>
<tr>
<td>Links with policy</td>
<td>3.67</td>
</tr>
<tr>
<td>Financial resources</td>
<td>4.50</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-Saharan Africa (n = 15)</th>
<th>Asia and the Pacific (n = 9)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management factor</td>
<td>Problem Importance</td>
</tr>
<tr>
<td></td>
<td>Average</td>
</tr>
<tr>
<td>Planning/priority setting</td>
<td>1.27</td>
</tr>
<tr>
<td>Reward &amp; incentive</td>
<td>1.36</td>
</tr>
<tr>
<td>Resource allocation/budgeting</td>
<td>1.64</td>
</tr>
<tr>
<td>Monitoring &amp; evaluation</td>
<td>1.64</td>
</tr>
<tr>
<td>In-service training</td>
<td>1.64</td>
</tr>
<tr>
<td>Personnel management</td>
<td>1.71</td>
</tr>
<tr>
<td>Library/Information</td>
<td>1.73</td>
</tr>
<tr>
<td>Strategic planning</td>
<td>1.87</td>
</tr>
<tr>
<td>MIS</td>
<td>1.93</td>
</tr>
<tr>
<td>Structure &amp; organization</td>
<td>1.93</td>
</tr>
<tr>
<td>Links with policy</td>
<td>2.00</td>
</tr>
<tr>
<td>Financial resources</td>
<td>2.00</td>
</tr>
<tr>
<td>Formulating policy</td>
<td>2.00</td>
</tr>
<tr>
<td>Donor links</td>
<td>2.08</td>
</tr>
<tr>
<td>Physical resources</td>
<td>2.14</td>
</tr>
<tr>
<td>Constraint diagnosis</td>
<td>2.29</td>
</tr>
<tr>
<td>Links with technology transfer</td>
<td>2.36</td>
</tr>
<tr>
<td>Links with external knowledge</td>
<td>2.79</td>
</tr>
</tbody>
</table>

Note: Factors are presented in rank order (1 to 5 scale, where 1 = very important problem).
APPENDIX V

LIST OF PAPERS PREPARED BY ISNAR FOR THE REVIEW

I ISNAR Collaboration with National Agricultural Research Systems: Achievements, Impacts and Constraints

This paper has six background papers:

1 Institutional Development in NARS: Illustrative Cases. Warren Peterson, editor.
3 Recent Improvements in NARS: Country Summaries. Rudolf Contant.
6 Training at ISNAR. Paul Marcotte and Robert Raab.


This paper has an Annex: ISNAR Research Program, 1986-1990

III Summary of Actions Taken in Response to Last EPR.

IV Key Elements of ISNAR’s Revised Strategy.

V Summary of Actions Taken in Response to Last EMR and Other Significant Management Changes Since 1985.

VI Paper on Strategic and Medium-Term Planning.

VII Internal Program and Management Reviews.
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>AARD</td>
<td>Agency for Agricultural Research and Development (Indonesia)</td>
</tr>
<tr>
<td>AARINENA</td>
<td>Association of Agricultural Research Institutes in the Near East and North Africa</td>
</tr>
<tr>
<td>ADB</td>
<td>Asian Development Bank</td>
</tr>
<tr>
<td>ARMP</td>
<td>Agricultural Research Management Project (Indonesia)</td>
</tr>
<tr>
<td>BAPPENAS</td>
<td>planning ministry (Indonesia)</td>
</tr>
<tr>
<td>BOT</td>
<td>Board of Trustees</td>
</tr>
<tr>
<td>CARDI</td>
<td>Caribbean Agricultural Research and Development Institute</td>
</tr>
<tr>
<td>CARIS</td>
<td>Current Agricultural Research Information System</td>
</tr>
<tr>
<td>CARP</td>
<td>Center for Agricultural Research Planning (Indonesia)</td>
</tr>
<tr>
<td>CARP</td>
<td>Council for Agricultural Research Policy (Sri Lanka)</td>
</tr>
<tr>
<td>CASER</td>
<td>Center for Agro-Socioeconomic Research (Indonesia)</td>
</tr>
<tr>
<td>CATIE</td>
<td>Centro Agronómico Tropical de Investigación y Enseñanza (Costa Rica)</td>
</tr>
<tr>
<td>CGIAR</td>
<td>Consultative Group on International Agricultural Research</td>
</tr>
<tr>
<td>CIAT</td>
<td>Centro Internacional de Agricultura Tropical</td>
</tr>
<tr>
<td>CILSS</td>
<td>Comité Permanent Inter-Etats de Lutte Contre la Sécheresse dans le Sahel</td>
</tr>
<tr>
<td>CIMMYT</td>
<td>Centro Internacional de Mejoramiento de Maíz y Trigo</td>
</tr>
<tr>
<td>CINDE</td>
<td>Coalition of Initiatives for Development (Costa Rica)</td>
</tr>
<tr>
<td>CIRAD</td>
<td>Centre de Coopération Internationale en Recherche Agronomique pour le Développement (France)</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Full Name</td>
</tr>
<tr>
<td>--------------</td>
<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td>CNRST</td>
<td>Conseil National de la Recherche Scientifique et Technique (Burkina Faso)</td>
</tr>
<tr>
<td>CONITTA</td>
<td>Comisión Nacional de Investigación y Transferencia de Tecnología Agropecuaria (Costa Rica)</td>
</tr>
<tr>
<td>CRES</td>
<td>Regional Center for Solar Energy Research (MALI)</td>
</tr>
<tr>
<td>CSIR</td>
<td>Council for Scientific and Industrial Research (Ghana)</td>
</tr>
<tr>
<td>CV</td>
<td>curriculum vitae</td>
</tr>
<tr>
<td>DPI</td>
<td>diagnosis, planning, and information</td>
</tr>
<tr>
<td>DRT</td>
<td>Department of Research and Training (Tanzania)</td>
</tr>
<tr>
<td>EC</td>
<td>European Community</td>
</tr>
<tr>
<td>EMR</td>
<td>External Management Review</td>
</tr>
<tr>
<td>EPR</td>
<td>External Program Review</td>
</tr>
<tr>
<td>FAO</td>
<td>Food and Agriculture Organization of the United Nations</td>
</tr>
<tr>
<td>GHASTINET</td>
<td>Ghana Science and Technology Information Network</td>
</tr>
<tr>
<td>GOI</td>
<td>Government of India</td>
</tr>
<tr>
<td>GTZ</td>
<td>Deutsche Gesellschaft für Technische Zusammenarbeit (Germany)</td>
</tr>
<tr>
<td>HRD</td>
<td>human resource development</td>
</tr>
<tr>
<td>IARC</td>
<td>international agricultural research center</td>
</tr>
<tr>
<td>IBPGR</td>
<td>International Board for Plant Genetic Resources</td>
</tr>
<tr>
<td>ICI</td>
<td>Imperial Chemical Industries</td>
</tr>
<tr>
<td>ICIPE</td>
<td>International Centre of Insect Physiology and Ecology</td>
</tr>
<tr>
<td>IDR</td>
<td>Institut Développement Rurale (Burkina Faso)</td>
</tr>
<tr>
<td>IFAD</td>
<td>International Fund for Agricultural Development</td>
</tr>
<tr>
<td>IFARD</td>
<td>International Federation of Agricultural Research Systems for Development</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Full Name</td>
</tr>
<tr>
<td>--------------</td>
<td>-----------</td>
</tr>
<tr>
<td>IFPRI</td>
<td>International Food Policy Research Institute</td>
</tr>
<tr>
<td>IICA</td>
<td>Instituto Interamericano de Cooperación para la Agricultura</td>
</tr>
<tr>
<td>IIE</td>
<td>International Institute for Education</td>
</tr>
<tr>
<td>IIMI</td>
<td>International Irrigation Management Institute</td>
</tr>
<tr>
<td>ILRAD</td>
<td>International Laboratory for Research on Animal Diseases</td>
</tr>
<tr>
<td>INERA</td>
<td>Institut d'Études et de Recherches Agricoles (Burkina Faso)</td>
</tr>
<tr>
<td>INFORM</td>
<td>Information for Agricultural Research Managers</td>
</tr>
<tr>
<td>INIA</td>
<td>Instituto Nacional de Investigación Agropecuaria (Uruguay)</td>
</tr>
<tr>
<td>INIBAP</td>
<td>International Network for the Improvement of Banana and Plantain</td>
</tr>
<tr>
<td>INTA</td>
<td>Instituto Nacional de Tecnología Agropecuaria (Argentina)</td>
</tr>
<tr>
<td>IPR</td>
<td>Internal Program Review</td>
</tr>
<tr>
<td>ISNAR</td>
<td>International Service for National Agricultural Research</td>
</tr>
<tr>
<td>KARI</td>
<td>Kenya Agricultural Research Institute</td>
</tr>
<tr>
<td>LAC</td>
<td>Latin America &amp; Caribbean</td>
</tr>
<tr>
<td>LAN</td>
<td>local area [computer] network</td>
</tr>
<tr>
<td>MAG</td>
<td>Ministerio de Agricultura y Ganadería (Costa Rica)</td>
</tr>
<tr>
<td>MALDC</td>
<td>Ministry of Agriculture and Livestock Development and Cooperatives (Tanzania)</td>
</tr>
<tr>
<td>MDI</td>
<td>management development institute</td>
</tr>
<tr>
<td>MIS</td>
<td>management information system</td>
</tr>
<tr>
<td>MLD</td>
<td>Ministry of Livestock Development (Kenya)</td>
</tr>
<tr>
<td>MTP</td>
<td>Medium-Term Plan</td>
</tr>
<tr>
<td>NARLM</td>
<td>National Agricultural and Livestock Research Masterplan (Tanzania)</td>
</tr>
<tr>
<td>NARS</td>
<td>national agricultural research system/s</td>
</tr>
<tr>
<td>Acronym</td>
<td>Description</td>
</tr>
<tr>
<td>---------</td>
<td>-------------</td>
</tr>
<tr>
<td>NGO</td>
<td>nongovernment organization</td>
</tr>
<tr>
<td>ODA</td>
<td>Overseas Development Administration (United Kingdom)</td>
</tr>
<tr>
<td>OECD</td>
<td>Organisation for Economic Co-operation and Development</td>
</tr>
<tr>
<td>OFCOR</td>
<td>On-Farm Client-Oriented Research</td>
</tr>
<tr>
<td>ORSTOM</td>
<td>Office de la Recherche Scientifique et Technique Outre Mer (France)</td>
</tr>
<tr>
<td>P&amp;B</td>
<td>program and budget</td>
</tr>
<tr>
<td>PC</td>
<td>personal computer</td>
</tr>
<tr>
<td>PMIS</td>
<td>Project Management Information System</td>
</tr>
<tr>
<td>PRECODEPA</td>
<td>Programa Regional Cooperativo de Papa</td>
</tr>
<tr>
<td>PROCIANDINO</td>
<td>Programa Cooperativo de Investigación Agrícola para la Subregión Andina</td>
</tr>
<tr>
<td>PROCISUR</td>
<td>Programa Cooperativo de Investigación Agrícola del Cono Sur</td>
</tr>
<tr>
<td>RAPA</td>
<td>Regional Office for Asia and the Pacific (FAO)</td>
</tr>
<tr>
<td>R&amp;D</td>
<td>research and development</td>
</tr>
<tr>
<td>RTTL</td>
<td>Research-Technology Transfer Linkages</td>
</tr>
<tr>
<td>SACA</td>
<td>Staff Advisory Committee on Administration (ISNAR internal committee)</td>
</tr>
<tr>
<td>SACCAR</td>
<td>Southern African Centre for Cooperation in Agricultural Research</td>
</tr>
<tr>
<td>SADCC</td>
<td>Southern Africa Development Co-ordination Conference</td>
</tr>
<tr>
<td>SAFGRAD</td>
<td>Semi-Arid Food Grains Research and Development</td>
</tr>
<tr>
<td>SODEMI</td>
<td>Société de Développement des Mines (Côte d’Ivoire)</td>
</tr>
<tr>
<td>SPAAR</td>
<td>Special Program for African Agricultural Research</td>
</tr>
<tr>
<td>SSTR</td>
<td>Rural Technology Transfer System (Ecuador)</td>
</tr>
<tr>
<td>TAC</td>
<td>Technical Advisory Committee of the CGIAR</td>
</tr>
<tr>
<td>UK</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>Acronym</td>
<td>Full Name</td>
</tr>
<tr>
<td>---------</td>
<td>-----------</td>
</tr>
<tr>
<td>UNDP</td>
<td>United Nations Development Programme</td>
</tr>
<tr>
<td>US/USA</td>
<td>United States/United States of America</td>
</tr>
<tr>
<td>USAID</td>
<td>United States Agency for International Development</td>
</tr>
<tr>
<td>UST</td>
<td>University of Science and Technology (Kumasi, Ghana)</td>
</tr>
<tr>
<td>WANA</td>
<td>West Asia &amp; North Africa</td>
</tr>
</tbody>
</table>