The Consultative Group on International Agricultural Research (CGIAR) held its main annual meeting, International Centers Week, from Monday, October 24 to Friday, October 28, 1994 at The World Bank in Washington, D.C. Mr. Ismail Serageldin, Chairman, presided. A summary of proceedings and of the main decisions reached appears on the pages that follow. Verbatim transcripts of proceedings are on file at the CGIAR Information Center, Room J4-034, The World Bank.

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**CONTENTS**

Introduction .......................................................... 1

**Revitalizing the New CGIAR** ....................................... 2
- Chairman’s Progress Report ...................................... 2
- A Research Agenda for the Future .................................. 4
- Governance in the CGIAR ........................................... 5
- New Financial Arrangements ....................................... 7
  - Matrix Framework .............................................. 7
  - Financing Plan .............................................. 8
  - Strategies .................................................. 8
  - Global Context ............................................. 8

**Funding** .................................................................. 8
- 1995 Requirements .................................................. 8
- Pledging and Financing Plan ....................................... 8
- 1996 Program Directions .......................................... 8

**Systemwide Programs** ........................................... 9
- Implementing a Genetic Resource Program ....................... 9
- CGIAR-FAO Agreement on Plant Genetic Resources ............ 9
- Progress Towards a Systemwide Genetic Resources Program 10
- Decisions .......................................................... 11

**Systemwide and Ecoregional Initiatives** ....................... 11
- Introduction ..................................................... 11
- TAC’s Report ..................................................... 11
- Discussion ....................................................... 12
- Decisions ........................................................ 14

**Activity Reports** ................................................ 14
- Technical Advisory Committee .................................... 14
- Oversight Committee ............................................... 15
- Finance Committee ................................................ 16
- **Ad Hoc Evaluation Committee** ................................ 17
  - IIMI External Program and Management Review ............ 17
  - External Review Processes in the CGIAR ...................... 18
- Livestock Research ................................................ 18
- Banana and Plantain Research ................................... 19
- Committee of Board Chairs (CBC) ............................... 19
- Center Directors Committee (CDC) ............................. 20
- Public Awareness and Resource Mobilization Committee (PARC) .................. 20
- Presentation by Downes Ryan International ..................... 21
Special Events ................................................... 21
Farewell to TAC Chairman ..................................... 21
Tributes ................................................................ 22
Presentation of 1994 CGIAR King Baudouin Award .......... 22
Launch of Feeding and Greening the World .................. 23
Vision 2020 Initiative ......................................... 23
Desertification Convention ..................................... 24
Population Conference ....................................... 24

Future Meetings .................................................. 25

Conclusion ......................................................... 25

Annex I - Agenda .................................................. 26
Annex II - Chairman’s Opening Address ....................... 34
Annex III - Chairman’s Closing Statement ................. 43
Annex IV - Science Forum .................................... 52
Annex V - Specialized Activities ............................ 64
Annex VI - List of Documents ................................. 67
Annex VII - CGIAR Reform Program -- 18 month Timetable .. 68
Annex VIII - List of Participants ............................. 70
CGIAR INTERNATIONAL CENTERS WEEK, 1994

SUMMARY OF PROCEEDINGS AND DECISIONS

INTRODUCTION

International Centers Week (ICW), the main annual meeting of the Consultative Group on International Agricultural Research (CGIAR), took place on October 24-28, 1994 in the auditorium of the World Bank’s "H Building" in Washington D.C. Mr Ismail Serageldin, Chairman, presided. ICW94 was the first CGIAR meeting attended by the Group’s newest member, Colombia. Two innovations were introduced at ICW94: a Science Forum on the opening day and, later in the week, parallel sessions of the Oversight and Finance Committees, both open to members only, and of two Ad Hoc Committees, both “open ended” with proceedings open to all interested CGIAR members. Over 50 other meetings on technical subjects connected with sustainable agriculture for food security in developing countries were held in the week preceding ICW94, with logistical support from the CGIAR and with CGIAR members and scientists participating.

The ICW94 Science Forum was a continuation of the dialogue that began at the joint World Bank-National Academy of Sciences (NAS) Science Forum, held in Washington DC on September 23 as a complementary event to the Second Annual World Bank Conference on Environmentally Sustainable Development, and was followed up at the First Meeting of the Commission on Science and Technology for Sustainable Development in the South organized by the Government of Pakistan on October 4-5 at which Prime Minister Benazir Bhutto delivered the keynote address. The ICW94 Science Forum examined the need for science capacity in developing countries in the context of agricultural development, the difficulties in building that capacity, and the role of the international community in this task. The Science Forum concluded that the international community should be encouraged to take on the broad promotion of science, in all its dimensions, so that they can be brought to bear on the problems of the poor. (For a report on the ICW94 Science Forum, see Annex IV).

The experiment with parallel sessions was proposed both by the Study Panel on Governance -- set up as part of the effort to launch a new CGIAR -- and the CGIAR Oversight Committee, to test the possibility that the CGIAR can conduct its business more efficiently if some business items are handled in parallel sittings by several committees. Such committees are not expected to make decisions for the Group but to recommend action for consideration and decisions in plenary. An Ad Hoc Committee (Chair: Rob D. van den Berg, The Netherlands) considered the External Program and Management Review of the International Irrigation Management Institute (IIMI) and a draft on review processes in the CGIAR from the Group’s Technical Advisory Committee (TAC). The other (Chair: Ismail El-Zabri, the Arab Fund) dealt with proposals for a paper on A Research Agenda for the Future to be developed as part of the preparations for a Ministerial-Level meeting in 1995.

The annual Sir John Crawford Memorial Lecture was delivered on October 27 by retiring TAC Chair Alex F. McCalla whose subject was "Agriculture and Food Needs to 2025: Why We Should Be Concerned." Copies of the Crawford Memorial Lecture are available from
REVITALIZING THE CGIAR

Chairman’s Progress Report

International Centers Week 1994 was an important milestone in the 18-month process of renewal and rededication which the CGIAR began at its New Delhi Mid-Term Meeting last May (MTM94). Through this effort the CGIAR expects to clarify its vision, refocus its research agenda, reform its governance and operations, restructure its financial arrangements and secure stable support for its international mission.

Earlier in the year, the CGIAR faced a crisis caused primarily by a diminution of funding. The implicit breakdown of support for CGIAR centers demoralized center scientists, threatened the integrity of CGIAR-funded research, and eroded the system’s capacity to serve as an effective tool of development. Responding to this crisis, the CGIAR undertook both a short-term program to stabilize its finances in 1994 and 1995, and comprehensive overall reforms with long-term implications that would lead to the launching of a reinvigorated CGIAR within the 18-month framework. A detailed timetable was adopted (See Annex VI) and a series of interconnected studies were completed as springboards for action. Each step along the way is as important as the other, CGIAR Chairman Ismail Serageldin pointed out, when he presented ICW94 with a progress report on developments in the period since MTM94 (for the full text of the Chairman’s Opening Address, see Annex II).

Central to the short-term stabilization program was an agreement by the World Bank that, as part of an overall reform program for revitalizing the CGIAR, the Bank should join with other donors in closing an estimated financing gap of $60 million over 1994 and 1995. To this end, the Bank approved a package of assistance which included a one-time grant of up to $20 million to match additional contributions from other donors at a ratio of 1:2.

Since June 1994, CGIAR donors have committed $20.1 million in additional funding for 1994, thus triggering the release of $10.1 million in matching funds from the Bank’s emergency allocation. The additional support has been provided in the form of either new funds ($12.6 million) or funds reprogrammed from activities outside the agreed research agenda ($7.5 million). These additional contributions totalling $30.2 million raised total 1994 contributions to $265 million. This amount will fully finance the 1994 work program as the requirements initially estimated at $270 million have been revised to about $265 million because of a reduction of the amount required for new systemwide initiatives. The prospects are equally positive for 1995, with full funding anticipated.
This enables the CGIAR to concentrate on its preparations for the Lucerne meeting. Those preparations include refinement of the mechanisms adopted at New Delhi -- such as a matrix approach to funding and a shift to a program-based research agenda -- as well as the development of new ideas for governance and financial strategy. The matrix approach, by plotting programs in relation to centers, explicitly recognizes the ability of each donor to provide its support to an individual center (with freedom to reallocate funds among activities within that center's work program) or to individual programs (with freedom to reallocate among centers active in the implementation of that program) or to a specific cell in the matrix. The transparency provided by this approach will enable the CGIAR to ensure that no part of the overall research agenda and work program adopted in the matrix remains unfunded and that no individual cell of the matrix is oversubscribed.

Ideas concerning all aspects of the CGIAR were reviewed in September by the Group's Steering Committee, Oversight Committee, Finance Committee, and a specially convened Stakeholder Panel led by Mr. M. S. Swaminathan, and are embodied in a set of five documents on vision, the research agenda, proposals for governance overhaul and new financial arrangements, together with an overview encapsulating the substance of the five. Eventually, these documents will form the Manifesto of the new CGIAR. The vision statement was adopted after a full discussion in New Delhi. However, the full complement of documents should be looked upon as "work in progress." Mr. Serageldin emphasized, because it certainly was not the intention of the CGIAR to present international decisionmakers with a fait accompli, expecting them simply to "rubber stamp" its own proposals.

When the CGIAR was created, the international community meeting in Bellagio formulated a set of priorities and principles to guide it. The legacy of Bellagio has sustained now turns again to the international community for guidance and invites it to be fully engaged in redefining the vision, research agenda, governance and financial arrangements of the CGIAR. The documents under preparation should be reviewed at ICW94 against that background, Mr. Serageldin said.

Mr. Serageldin covered the different aspects of the CGIAR that are earmarked for change and said that members would have the opportunity to direct the course of change during the discussions on documents being developed for Lucerne. Change, he added, should protect the existing strengths of the CGIAR while nurturing new ones. In doing so, he said, it would be necessary to go beyond just the budgets, the matrices, the processes, and the programs, to the human aspects of their endeavors. The CGIAR mission statement is all about people -- emphasizing how scientific research and new technology can support the weak and the poor. This emphasis on people demonstrates that the CGIAR combines intellect and compassion in a very noble enterprise. In dealing with the fate and future of poor people, he added, the CGIAR is increasingly concerned about environmental issues and their link with poverty because food security, poverty, and environmental protection are inextricably intertwined.

The poor, whether they live in the cities or in the rural areas, are suffering under miserable conditions. They are unable even to maintain the fertility of their soils, and so much has to be done on their behalf. These conditions, Mr. Serageldin said, are at the core of the challenge that confronts the CGIAR. "The challenge, I think, for which the CGIAR contribution is absolutely essential, is to produce differently, not less. We have to produce more but we have to produce differently both to protect the environment and reach the poor." Facing up to the challenge, he said, will require a change in the institutional culture that permeates the CGIAR, and a paradigm shift.

He concluded: "I invite you, therefore, to look at this process of renewal in which we are
engaged as an opportunity to change the paradigm, and that we need to do it not just for the CGIAR but we need to do it for the poor and the marginalized of the world. We need to do it for the women who are bearing the cost of the inequity of the current status quo. We need to do it for the generations to come for whom we are custodians of this planet, and we need to do it for Mother Earth herself."

**A Research Agenda for the Future**

The draft document presented for discussion reviewed the elements that shape the CGIAR research agenda, the process through which the agenda is formed, the current agenda expressed in terms of research activities, and presented two views of the future agenda. The draft was extensively discussed in plenary and was referred to an Ad Hoc Committee which made a number of recommendations for further development.

Committee Chair Ismail El-Zabri, reporting in plenary, said that discussion of the draft research agenda had focused on how it could be improved to make it more relevant for the Ministerial-level Meeting. The Committee considered both the substance of the research agenda and its presentation. On substance, the Committee broadly endorsed the research agenda, particularly the 1994–95 agenda, although it questioned the separation of certain research activities, such as germplasm conservation and germplasm enhancement. He said the Committee recommended that the rationale behind the research agenda should be explicit, and that the research agenda should be better integrated with the other documents for the meeting.

Commenting on the session of the Committee itself, Mr. El-Zabri said it had met informally and with an open agenda, and that the resulting discussion had been thorough and purposeful. He suggested that the usefulness of parallel sessions could be increased in the

Following is a summary of the main details discussed in plenary and in committee:

- Two papers are required, a longer, more technical paper primarily for technocrats and a shorter version, for inclusion in an Overview. The substance of the longer paper must be consistent with the research agenda section in the Overview.

- A cogently argued and illustrative paper on the CGIAR research agenda (i.e. the longer version) is vital to convincing decisionmakers in donor countries that the CGIAR is an invaluable component of the global agricultural research system although it accounts for only 4 percent of the investment on agricultural research.

- The paper should demonstrate strong awareness within the CGIAR of the need for close linkages with institutional actors, in the broad area of international agricultural research; particularly, in the dimensions of complementarity with other suppliers of research products, including the private sector, and complementarity with institutions adapting, extending and diffusing finished products based on the CGIAR’s intermediate outputs.

- The paper should demonstrate the capacity of the CGIAR to play a leadership role in international fora dealing with research and development issues but should also acknowledge that the CGIAR understands it cannot act in isolation and accepts a role as an international tool in global processes.

- The paper needs to reflect changes in the CGIAR from a singleminded emphasis on productivity through new germplasm and high levels of external inputs to a twin emphasis on productivity and natural
resources management. Thus, the paper
its new initiatives towards a more balanced
portfolio, and how it has drawn lessons
from the green revolution experience on
the necessary marriage of productivity with
the conservation of soil and water
nutrients. The potential contribution of
agricultural research to environmental
quality should be explicit.

- The paper should also illustrate the
CGIAR's sense of responsiveness as seen
in its search for new mechanisms:
including a determination to find ways for
national agricultural research systems
(NARS) to articulate priorities for the
international research effort, and to operate
as a coherent system -- rather than as 16
independent centers -- when necessary for
effective effort on global issues.

- Novel approaches and methods in research
should be outlined so as to show that the
CGIAR is an innovator all the way through
the R & D process.

- The substance of the paper should be
output related. It should make the case for
research as an essential component of the
wider development effort, be explicit about
delivery systems for CGIAR outputs, and
demonstrate that people -- farmers and
consumers -- have a role in the shaping and
delivery of research products.

- A shorter version of the research agenda
paper (for incorporation in the Overview)
should highlight future issues and themes
in terminology familiar and attractive to the
international community. This would
include references to the substance of the
CGIAR's actions to implement UNCED's
Agenda 21 and the clear compatibility
between CGIAR policies and the new
international conventions on biological
diversity, climate change and
desertification.

The Group accepted the recommendations
of the Ad Hoc Committee and said that its
valuable guidelines should be followed when
the paper is revised.

**Governance in the CGIAR**

The self-examination undertaken by the
CGIAR, partly as a result of the financial crisis,
included careful review of the system's
governance mechanisms. A cautious approach
was taken so that such defining characteristics
as the Group's sense of collegiality, its focus
on research as a gateway to development, its
non-political character, and its informality
should not be lost. As a first step towards
governance overhaul, two standing
committees, for Oversight and Finance, were
established at the 1993 Mid-Term Meeting in
Puerto Rico. Further reforms were deemed
necessary, and a Steering Committee under the
leadership of the CGIAR Chairman was
established at MTM94. Members of the
Oversight and Finance Committee comprise the
Steering Committee. Also at MTM94 the
Group decided that a study was required on the
CGIAR's long-term governance and financing
structure. In the light of the urgency of getting
the study completed in time for consideration
at ICW94, the Chairman appointed a seven
person study panel made up of individuals
familiar with different aspects of the CGIAR
and of external management consultants. This
Panel met twice under the chairmanship of Mr.
Klaus Winkel (Denmark) and completed its
report in time for consideration at ICW94.

The report of the Study Panel was
presented to the Group by Mr. Andrew Bennett
(UK) in the unavoidable absence of Panel Chair
Klaus Winkel. The Group complimented the
Panel for a comprehensive report that had been
prepared in a remarkably short time, thanked
Mr. Winkel for his effective leadership of the
Panel, and commended Mr. Bennett for his
masterly presentation characterized by clarity,
erudition, and wit.
During the discussion that followed the presentation, the Panel’s emphasis on an open and open-minded system was particularly welcomed. The Panel’s recommendations were examined in some detail with the following proposals dominating the discussion:

a. **Global Forum and Regional Fora.** The report proposed that periodic fora with wider than CGIAR participation should help to set the agenda for international agricultural research. This would integrate the CGIAR more strongly within the global research system, enhance the relationship between CGIAR scientists and their partners, and broaden ownership of the system and its research agenda.

b. **Business Forum.** The report outlined proposals for expanding developing country membership in the CGIAR and, if the measures succeed, re-appraising the current regional representatives mechanism.

c. **CGIAR’s decisionmaking structure.** Continuation of the present arrangements was proposed, with the existing committee system left intact and with (a) a lean MTM, and (b) a CGIAR Bureau.

d. **Moving towards a program-based operating system,** with appropriate management structures for programs.

e. **Strengthening impact assessment.**

The following conclusions were reached after an exhaustive discussion:

- The themes outlined in the report are endorsed.
- The role of the cosponsors is invaluable and should continue.
- The Group is willing to experiment with establishing and conducting a periodic Global Forum but wishes to reconsider the frequency of such meetings. The Global Forum should be linked with other existing efforts to define global research priorities. Regional organizations with developing country membership should be brought into the CGIAR, through mechanisms such as the Global Forum.
- TAC should play a major role in preparations for a Global Forum and TAC members should participate actively in each of them.
- The proposal to strengthen the Business Forum of the CGIAR by broadening its membership to include more developing country members was strongly endorsed. The primary objective of such an expansion would be to establish full North-South ownership of the CGIAR enterprise.
- Under the proposed expansion, the minimum contribution by members (of $500,000 per year) will not be changed. The suggestion that small, poor countries might be permitted to pool resources for combined membership could be considered.
- The existing arrangements for a Steering Committee, an Oversight Committee, and a Finance Committee should remain unchanged.
- No new standing committees should be set up, but *Ad Hoc* Committees may be convened to deal with specific issues. Such committees would form a consultative mechanism. They would not reach decisions but would make recommendations to facilitate decisionmaking in plenary sessions.
- The matrix system and the management of the matrix were endorsed as guidelines for transparency and clarity.
- The system needs an impact evaluation unit to provide continuity to impact assessment.
New Financial Arrangements

The Group considered proposals for re-engineering the CGIAR’s financing arrangements so as to ensure full financing of the agreed research agenda, improve predictability and stability of funding for the centers, increase the transparency of financial arrangements and strengthen accountability. The proposed arrangements are expected to result in a sharper focus by donors on the agreed research agenda of the CGIAR, to demonstrate the explicit link between CGIAR research and the international development agenda, and provide a clearer identification of the CGIAR’s catalytic role in the global agricultural research system.

The re-engineering program is guided by several principles, including the public goods nature of CGIAR research, its international character, and the necessity for stable multi-year support. Flowing from these principles, the CGIAR is expected to seek enhanced participation by the South and full South-North ownership of the enterprise. The CGIAR research agenda will be defined primarily by the needs of its partners and owners in the developing world.

The highlight of the re-engineering proposals is a matrix framework for planning and financing CGIAR activities. At the global level, the framework will identify the linkages between research at CGIAR centers and other international agricultural research relevant to the needs of developing countries. This will sharpen the CGIAR’s focus in adopting an agenda of research programs to be carried out by the centers. The matrix framework will show how the CGIAR research agenda is linked with International development priorities (e.g. protection of the environment, food security, poverty alleviation) while the focus of specific research programs is maintained as well (e.g. genetic conservation, plant breeding, policy research).

When agreement has been reached on the research agenda, the matrix framework can be used to develop a financing plan, utilizing the sum of contributions by individual donors to centers, programs, and projects in addition to funds from the World Bank which contributes to the CGIAR system as a whole. To create a plan and give the centers firm guidance, the CGIAR will need to develop a process of consultations among the various parties involved to resolve differences on issues such as overfunding or underfunding of cells in the matrix. Given the long-term nature of research, financing arrangements should ideally be in the form of multi-year (three to five years) commitments.

Under the proposed new arrangements, the research program and funding needs of the following year will be outlined at the CGIAR Mid-Term Meeting held annually in May (e.g., for 1996 at MTM95). This will be preceded by Center-TAC interaction (around March) on the research agenda as well as on its funding requirements. The MTM decisions will be followed by financing discussions within donor agencies so that a firm financing plan can be put in place at International Centers Week (October) when funds are pledged. Also each October, initial discussions will take place on the research agenda for the succeeding year (i.e., in 1995 for 1997). This schedule permits stable and predictable planning and implementation of the research agenda.

Following a discussion of the proposed new financing arrangements, consensus was reached in the following areas:

Matrix Framework

The Group agreed on the importance of the proposed matrix framework as a tool to clarify the role of CGIAR within the global system, and develop the CGIAR agenda and Center work programs. A TAC task force is expected to develop suitable
definitions for the columns in the matrix and to provide content to the matrix. The Group agreed as well that the columns in the matrix do not imply new managerial structures to oversee approved programs and that Centers remain the principal implementors of CGIAR programs.

**Financing Plan**

The four existing financing modalities -- System (i.e. Bank), Center, Program and Project support -- should be preserved. No disincentives will be applied to unrestricted donors to Centers to restrict or limit their contributions to programs or projects. Donors and Centers will be expected to exercise discipline and ensure funding of the agreed research agenda. Negotiations may be required between donors and the Secretariat to reach closure on the financing plan.

**Strategies**

There was strong endorsement of multilateralism, multi-year financial support, public sector support as the primary source of funding international public goods research, increased participation and ownership by developing countries as equal partners away from the old donor/recipient concepts, and rejection of the commercialization of research. The Group decided on a cautious approach to proposals for establishing a foundation to stabilize support for the CGIAR. The Ford Foundation’s offer of funds to examine this concept was welcomed.

**Global Context**

During the course of the discussion it was agreed that a separate paper on the global context in which the CGIAR functions should be drafted as part of the "manifesto" for presentation at Lucerne.

**FUNDING**

**1995 Requirements**

The amount required to fund the 1995 research agenda is $271.2 million (up from an earlier estimate of $268.2 million), consisting of $262.8 million for center budgets (including provisions for external reviews) and $8.4 million for systemwide initiatives. The latter figure includes $3.0 million added during ICW94 discussions.

**Pledging and Financing Plan**

The Chairman thanked all members who announced their 1995 contributions at ICW94 and urged others to inform the Secretariat of their intentions as soon as possible. Firm commitments and early disbursements were required, he pointed out, to enable centers to plan their work with confidence. Based on indications by donors at ICW94 or in other communications, estimates of project activities from centers and an anticipated continuation of 1994 levels of support where information for 1995 is not yet available, the Secretariat projects that contributions for 1995 will be about $268 million, leaving a shortfall of about $3 million. This can be met with a modest effort by donors. Based on this information the Finance Committee proposed a financing plan for 1995 (discussed further under the Finance Committee report) which was approved.

**1996 Program Directions**

Guidelines to Centers will be provided by mid December 1994 reflecting the outcome of discussions by a Task Force to be convened by the TAC Chair. Centers and TAC will interact in March 1995 on the 1996 agenda to develop final proposals. Substantive discussion of the 1996 agenda will take place at MTM95.
SYSTEMWIDE PROGRAMS

Implementing a Genetic Resources Program

Several separate but inter-related issues and activities were dealt with under this agenda item. They included the signing of the CGIAR-FAO Agreement on Plan Genetic Resources; discussion of two reports, one from the CGIAR Panel on Intellectual Property Protection, the other on Progress Towards a Systemwide Genetic Resources Program; and relations between the CGIAR and other groups that deal with genetic resources and intellectual property protection.

CGIAR-FAO Agreement on Plant Genetic Resources

In a formal signing session, CGIAR Chairman Ismail Serageldin and Mohammed Zehni, on behalf of FAO, signed agreements placing the genetic resource collections of the CGIAR centers under the auspices of the FAO’s Commission on Plant Genetic Resources. Twelve separate but identical agreements were signed on behalf of CIAT, CIMMYT, CIP, ICARDA, ICRAF, ICRISAT, IITA, ILCA, IPGRI together with INIBAP, IRRI and WARDA.

The agreement provides an international legal framework for a multilateral plant genetic resources system, especially for major food crops. A draft was reviewed at MTM94 in New Delhi when members felt that some clarifications were required before the agreement was signed. These were sought and obtained, under Mr. Serageldin’s guidance. In June, at the second meeting of the Intergovernmental Committee on the Convention on Biological Diversity (ICCBD), CGIAR and FAO were encouraged to sign the agreement swiftly, in view of the first meeting of Contracting Parties to the Convention on Biological Diversity in November.

In brief remarks at the signing, Mr. Serageldin highlighted the landmark nature of the agreement. Besides significantly advancing international cooperation in conservation and use of plant genetic material, the CGIAR, by taking a unified approach, was truly acting as a system, speaking with a single voice. Elaborating on these points, he said that conserving the world’s genetic resources in food crops was critical for the very survival of humankind, and required a coordinated international effort. As the first institution to sign agreements with FAO, the CGIAR was bringing approximately one-third of the world’s currently collected and stored plant germplasm into FAO’s international network. The CGIAR hoped that both developed and developing nations and other institutions would follow its example and make the FAO network a truly universal instrument.

Mr. Serageldin also welcomed the new dimension of collaboration between CGIAR and FAO arising from the agreement, and reiterated the importance of the CGIAR system acting in a concerted fashion. This was essential, he stressed, if the CGIAR was going to influence policies related to genetic resources.

Mr. Zehni described the agreements as an important step towards realizing the FAO Global System on Plant Genetic Resources and in implementing inter-governmental initiatives. Signing the agreements, he added, opened the way to continuing progress in a dynamic process of consultation and cooperation.

Report of the CGIAR Panel on Intellectual Property Rights

Panel chair M. S. Swaminathan reaffirmed the critical importance of intellectual property rights (IPR) issues and commended the CGIAR for keeping them under constant review over the years. Two recent events, however, have created a major paradigm shift. The first is the Convention on Biodiversity, which recognizes all genetic wealth as the sovereign property of individual countries rather than as a global human heritage. The second event is the

In light of these developments, the panel identified four key issues affecting the work of the international centers and offered the following recommendations:

**Patents.** Patentable material available in the CGIAR system include vaccines; agricultural implements; and micro-organisms and other biological products, including bio-fertilizers, biopesticides and all forms of biotechnological inventions. Centers should seek patent protection in order to prevent appropriation by others, to ensure further product development, and to use ownership of intellectual property to negotiate access to other proprietary technology for the benefit of developing countries. Rights should be licensed to developing countries, however, on a no-cost basis. Centers and their boards should learn more about IPR issues and monitor developments relevant to their research programs. This might require some systemwide technical and legal support.

**Plant variety protection.** Signatories to the World Trade Agreement are obligated to develop plant variety protection systems. The panel felt strongly that these systems should address farmers’ rights to save and exchange seed. They should also include an exemption for research, and licensing provisions to promote diffusion of new varieties. The CGIAR was urged to play a active and catalytic role in helping developing countries develop national plant variety protection systems.

**In situ and ex situ germplasm collections.** The panel endorsed the CGIAR’s decision to place its ex situ germplasm collections under the auspices of the FAO Commission on Plant Genetic Resources, and urged it to promote in situ conservation.

**Publication of Information.** CGIAR centers were urged to explore new methods of information technology to facilitate early disclosure and wide dissemination of research results.

**Progress Towards a Systemwide Genetic Resources Program**

At MTM94 the Group took several steps towards creating a systemwide initiative in genetic resources. In addition to elevating the status of centers’ Genetic resource units to program level, donors mandated the Inter-Center Working Group on Genetic Resources to act as a steering committee for the systemwide program and designated IPGRI as lead center. Following MTM94, IPGRI director general Mr. Geoff Hawtin reported, a program and budget proposal was submitted to TAC. It consists of two components. One part involves a funding request for specific systemwide activities, while the other part relates to coordination. Conceptually, the systemwide approach embraces independent, center-managed genetic resource units as components coordinated by the Inter-Center Working Group and a lead center, which provides a secretariat.

Information generation, both of a technical and public awareness nature, will continue to be a major activity. Through SINGR, the Systemwide Information Network on genetic Resources, centers’ databases will be electronically linked and accessible internationally. The system is expected to take 10 months to two years to design and implement. To ensure that centers’ genebank facilities are adequate and well managed, an independent team of external experts will be appointed to evaluate the current status of genebank facilities and operations and recommend improvements.

New activities for which funding was requested include a system to repatriate sub-samples to countries of origin; regional initiatives on in situ conservation and biodiversity; collaborative research looking at economic and policy aspects of genetic resources; collaborative research on conservation technology; training; and
participation at the Fourth International Technical Conference on Plant Genetic Resources to be held in 1996. This conference is expected to produce a global action plan that will seek high level political endorsement.

**Decisions**

Following a discussion of the reports presented and the issues raised, the Group decided that the CGIAR Chairman should be the system’s ambassador in relations and negotiations with other institutions in this field. A CGIAR committee on genetic resources was established under the chairmanship of M. S. Swaminathan to assist the CGIAR Chairman in this leadership role and to advise the CGIAR on policy matters.

**Systemwide and Ecoregional Initiatives**

**Introduction**

At ICW93 the Group accepted TAC’s recommendation to allocate $10 million in 1995 for systemwide and ecoregional activities. Priority was assigned to eight ecoregions and to systemwide initiatives in genetic resources, livestock and water management. TAC identified convening centers (centers with an initiating and facilitating role) to take the lead in developing proposals. These were to be submitted in the context of the centers’ 1995 program and budget proposals.

Subsequently, at New Delhi, the Group identified additional themes based on recommendations from a task force chaired by Stein Bie of Norway on CGIAR’s follow up to UNCED and Agenda 21, and a report from IBSRAM. These related to marginal lands, soil and water nutrients, integrated pest management, *in situ* conservation, and geographical information systems.

To frame the Group’s discussion at ICW94, TAC Chair Alex McCalla reported on TAC’s deliberations and this was followed by four presentations: (1) Alternatives to Slash and Burn by Pedro Sanchez, Director General, ICRAF; (2) Rice/Wheat Based Cropping Systems by Jim Ryan, Director General, ICRISAT; (3) American Lowland Tropics by Bob Havener, Interim Director General, CIAT; and (4) The Zschortau Plan by Jochen de Haas of Germany.

**TAC’s Report**

Mr. McCalla informed the Group that TAC considered 17 proposals. The TAC document, "Review of Proposals for Systemwide and Ecoregional Initiatives," summarized each project and TAC’s evaluation and recommendation. TAC’s evaluation was based on the following criteria: Proposals should involve a conscious effort to extend, globally methodologies used in local studies, for ensuring compatibility of results across ecoregions, across specific themes and problems. They should involve at least two CGIAR centers. Systemwide issues should be multi-sectoral and multi-disciplinary in nature and scope.

Mr. McCalla said that the proposals embodied many interesting, innovative and exciting ideas, and that they included a great deal of participation among CGIAR centers, as well as among centers and national institutions, NGOs and others. Other points made by him included the following:

- CGIAR was in the process of trying to evolve a mechanism by which these programs could be developed effectively.
- Projects were at different levels of evolution. Some were being implemented and others were still in the design phase.
- TAC saw funding for ecoregional activities as primarily seed money to develop proposals and get them launched.
Although the recommended resources allocation of $5.4 million for 1995 represented only 1.5 percent of the CGIAR's agreed budget, this would increase to 3 percent when the initiatives were fully funded. If the ideas being formulated were implemented, the resources necessary to make them viable research programs would be significantly greater.

The following four presentations were made after Mr. McCalla's report:

- **Alternatives to Slash and Burn** (Pedro Sanchez, Director General, ICRAFI). This is a global program following an ecoregional approach at its sites. Three are currently being operated in Cameroon, Brazil and Indonesia.

- **Rice/Wheat Based Cropping Systems** (Jim Ryan, Director General, ICRISAT). With sites centered in the Indo-Gangetic Plain, the consortium is convened by ICRISAT. The Government of India, IRRI and CIMMYT are its research leaders.

- **American Lowland Tropics** (Bob Havener, Interim Director General, CIAT). Sites in Andean and Central American Hillsides seek to alleviate degradation and thus migration. Sites on the savannahs seek to intensify their use in feeding the urban poor and reduce pressure for land on the Amazon forests.

- **The Zschortau Plan** (Jochen de Haas). Following up the IBSRAM paper discussed at MTM94, this action plan proposes an international soil, water and nutrient management program.

**Discussion**

Mr. Serageldin identified three broad issues that required the Group's attention. These were timing, concepts and administrative and budgetary issues.

The Group's decisions would not affect the 1995 budget, he said. Concerns raised in the course of the discussion would influence the 1996 budget and be reflected in documentation prepared for the next Mid-term Meeting. That was when the Group would debate implications and seek agreement.

Regarding conceptual issues, Mr. Serageldin wondered whether the Group was beginning to confuse desirable outreach and partnership building and process facilitation and research. "Will we be judged by the outcome or by effectiveness of the process?" he asked. To illustrate a second important conceptual issue, Mr. Serageldin referred to an overhead diagram reflecting individual components of a project labeled 1.1. through 1.5. Using the hypothetical example of the Highlands Initiative, he suggested that 1.1 through 1.4 represented activities conducted by individual centers and 1.5 the part that comprised common elements. This was, according to TAC, where the real systemwide payoff lay. Thus, as the Group constructed the matrix it was using to plot its support for centers and programs, were members looking at an activity that had all five components in it? For that case, individual pieces could be funded before the interlinking piece. Or were members looking at the interlinking piece as being of central benefit to the system and the one that should be brought on board?

With regard to administrative and budgetary issues, Mr. Serageldin drew attention to the leadership role of the centers and the convening center model. The four presentations reflected four very different approaches. At one end of the scale was ICRISAT, playing a low-keyed facilitating role with the bulk of work being done by CIMMYT and IRRI. At the other end was what could be perceived as CIAT's perhaps excessive leadership role in Latin America. And there was even a proposal for an initiative in soil, water and nutrient management with a non-CGIAR center involved. A second issue related to the high transaction costs and whether these were
a necessary cost to improved and more effective research.

During a lengthy and wide ranging debate, center proposals and TAC’s review were commended. The four proposals, it was said, represented precisely the kinds of initiative that members have asked for. The centers had drawn in NARS and external organizations and were doing things they had never done before, coming up with new models that by and large stood up to TAC’s scrutiny. Nonetheless, significant concern was expressed for the future process and outcome of these new initiatives.

Several argued that it was not possible to separate partnership building from the research agenda and strategic research outcomes. The projects were about partnership to get better science and results that were truly applicable in the circumstances they tried to address. By way of example, a delegate referred to the conclusion of the paper on soil and water management policy that a change of paradigm in research was needed. Past research was not successful in these fields because partnership with other important groups such as farmers was lacking. Another delegate urged the Group to accelerate its efforts to transfer environmental issues from the fringes of its program into the core of the agreed agenda, citing strong political reasons.

In another intervention, a member warned against the danger of allowing the Group’s enthusiasm for everything to subvert its real mission, namely to give clear mandates and resources to an international research system. He queried whether the Group had spent enough time defining its role and comparative advantage and the limits of that role. “We need to recognize,” he said, “that we can’t put everything into the box.” Several members associated themselves with his further observation that the proposals were too process oriented. They were not strong enough on analysis and did not indicate how their success would be judged. “If we get hooked on process we will create a tremendous wave of activity that will dig deep into the integrity of the centers.”

The point was also made that the Group had encouraged ecoregional activities without perhaps a very clear idea of how they would be carried out and how scientific quality would be balanced against the outreach component. If the CGIAR was going to work in this area it had to be experimental and innovative, and the proposals seemed to contain these ingredients. “While it is clear we need to refine the process and enhance the rigor of proposals we also need to get started,” a delegate urged.

Several participants suggested that the Group needed more in-depth analysis of methodology, complementarity and strategic issues, above and beyond what TAC was able to provide. One example given was that of strategic issues related to the Highland initiative and whether TAC had adequately addressed the question of lowland/highland interaction. In terms of methodology, it was also noted that the CGIAR system lacked skills in group decisionmaking and anticipatory planning, which were essential in putting together such complex projects as the systemwide and ecoregional initiatives.

The question was asked as to how the Group and TAC intended to handle the issue of appraisal. If centers entered into equal partnerships with other institutions, what would be TAC’s role in relation to the partners’ appraisal bodies. Some delegates felt that two kinds of appraisal mechanisms might be necessary: one to ensure scientific quality and one to judge the initial period in which no scientific program had yet been established but was going to be set up in a bottom-up fashion.

There was some concern about lack of clarity concerning which aspects of some of the systemwide and ecoregional projects were being classified as part of the agreed agenda in 1994 and onwards. For the sake of consistency, projects financed in 1994 also
needed to be financed in 1995. The confusion stemmed in part from the fact that a number of donors had disagreed with TAC's conclusions on priorities and elected to fund certain projects they deemed to be of high value.

Mr. Serageldin suggested that until discrepancies or inconsistencies could be resolved, rather than revisit the 1995 budget, donors should follow the example of the Rockefeller Foundation which was funding a specific proposal in 1995 but not counting it as part of its current support for the agreed agenda.

Decisions

In bringing the discussion to a close, Mr. Serageldin summarized the main decision emerging from the many points made:

- Although the Group was eager for ecoregional and systemwide programs to be brought on stream, members recognized that this openness involved transaction costs in partnerships and bottom-up priority setting, and that there was an opportunity cost for using those funds and resources.

- The Group was in a transition mode, and many procedures were evolving. Improving the rigor of analysis was a particular concern. To facilitate the implementation of initiatives which are already under way, as a transition measure the 1995 budget for systemwide and ecoregional initiatives will be increased by $3 million (one percent of the overall budget) to $8.4 million.

- Stakeholders will be invited to serve on task forces that will review the global context of CGIAR research in sustainable agriculture, and the ecoregional approach to research evolved by the CGIAR.

ACTIVITY REPORTS

Technical Advisory Committee

TAC Chair Alex McCalla, reporting on activities not covered as items on the ICW agenda, said TAC had met three times since the MTM94. First, TAC64, which was held at WARDA in June, featured an inaugural, formal interaction between TAC and NARS leaders from Sub-Saharan Africa. TAC, he said, will continue to seek such valuable consultations in the future when visiting a region for one of its meetings. The next is planned for the March 1995 TAC meeting in Lima, Peru. Second, a special TAC meeting was held in Davis, California in August to evaluate and make recommendations on system-wide and ecoregional proposals submitted by lead centers as well as to consider the 1995 budget and the redefinition of financial support from complementary to core. Third, TAC65, which was held in Washington DC in October immediately prior to ICW94, discussed items of common interest with Center Board Chairs and Center Directors.

Mr. McCalla reported that TAC had initiated discussions on the next round of CGIAR priority setting to provide the basis for resource allocation from 1999–2003. As the last TAC report on priorities and strategies dealt comprehensively with the demand for research, TAC will not engage in another major effort in that area, but will update available information and will draw on studies currently being undertaken by Centers in the context of IFPRI's 2020 Vision Initiative. TAC will discuss a concrete proposal on how to proceed with the process of setting CGIAR priorities and strategies at TAC66 in March 1995 and will present its report at ICW96.

Referring to TAC's review of CGIAR commitments in West Africa, Mr. McCalla said this was initially addressed as a desk study.
conducted by the TAC Secretariat that was sent to Center Directors for comment and considered at TAC64. An external panel was then commissioned by TAC to undertake the main phase of the study—visiting NARS, CGIAR Centers, and other institutions in West Africa. The panel’s draft report was considered at TAC65, which included a joint session with Center Directors. Mr. McCalla said the report was provocative and represented an alternative way of looking at how the CGIAR does business. The final report will be considered by TAC in March 1995 and presented to the Group at MTM95.

Mr. McCalla said that the external reviews of CIAT, CIP, and IITA had begun. The mid-term review of ICLARM will be conducted in February 1995. Planning for the external review of ICRISAT in 1996 had been initiated. An inter-center review of roots and tubers, a strategic study of public policy, public management, and institution building research, and a strategic study of soil and water related constraints to sustainable productivity will be conducted in 1995.

Oversight Committee

Committee Chair Paul Egger of Switzerland reported to the Group on the fifth and sixth meetings of the Oversight Committee. The last of these was held at ICW94 as part of a renewed experiment with parallel sessions of committees. The major items on the Committee’s agenda were governance; the Ministerial–level Meeting; policymaking on plant genetic resources; interaction with NARS; impact assessment; board membership; and due diligence matters.

On governance, he said the Committee supported the recommendations of the Study Panel on Governance and Finance. Turning to the Ministerial–level Meeting, Mr. Egger said the Committee strongly felt that there was a need for coherence among the documents being developed. All documents should portray the CGIAR’s dynamism and readiness for change. The Committee recommended that a fifth document be added to relate the CGIAR’s research agenda to the need for and role of research in the broader global economic and political context. This would directly link the research agenda to the major policy issues of concern to the ministers attending the meeting; for example, how to balance population growth, environmental policy, and food security in the context of sustainable development and needed productivity increases; and what the impact will be of global events, such as the end of the Cold War, the liberalization of trade, and the biodiversity convention, on technology transfer and the handling of public goods.

Mr. Egger applauded Mr. Serageldin’s leadership in forging a unified voice for the System on the important issue of CGIAR policymaking on plant genetic resources, and presented the Committee’s proposal that an Ad Hoc Committee on plant genetic resources be formed to address the need for wider analysis and consultation on the specific issues involved. On interaction with NARS, Mr. Egger said the Committee believed further progress is needed, particularly in the area of holding regional fora linked to priority setting.

Mr. Egger reported on the Committee’s recommendation that a permanent unit for impact assessment be established, independent of the centers to ensure its credibility, and close to Mr. Serageldin. On the subject of board membership, he said the Committee suggested that donor representatives should refrain from accepting board memberships. While the Committee recognized the value of having donor perspectives represented on center boards, it cautioned that donor members who in particular have responsibility for allocating resources to centers might have a conflict of interest in serving on boards. The Committee, he said, planned to submit a policy paper on this question to the Group at MTM95.
On membership of the Committee itself, he said a system of rotation would be started in 1995.

**Finance Committee**

Committee Chair Michel Petit of the World Bank reported to the Group on the three Finance Committee meetings held since the MTM in New Delhi. As with the Oversight Committee, the most recent Finance Committee meeting was held during ICW as part of the parallel sessions.

Reporting on 1994 funding, Mr. Petit said that funding for system-wide initiatives was slightly in excess of TAC’s recommendations, although this should not be of concern since funding was consistent with the decisions made at MTM94 in New Delhi and the slight excess allowed for flexibility in implementing the new and innovative system-wide initiatives. He reported on the final payment of the World Bank’s contribution, and on the issues resulting from the recent significant devaluation of the CFA, including the Committee’s recommendation that ICRISAT and WARDA, the two centers primarily affected by the devaluation, retain 50 percent of the unexpected increases in their funding and that the remaining 50 percent be reallocated to other centers for equity purposes. He said the Committee would appreciate guidance from the Group on how to handle such matters in the future. In discussions following the report, the **Group accepted the Committee’s recommendation to reallocate the additional funds received by ICRISAT and WARDA on a 50/50 basis.**

The Group delegated authority to the Committee to take action in the future on any such issues related to the impact of monetary shocks (i.e. from currency fluctuations) on Centers as they arise, without the prior authorization of the Group, including reallocation of funds if the Committee determines this to be the appropriate course of action. The **Group also agreed that a channel of communication should be established between the Committee and Center Directors.**

Regarding the 1994 agreed research agenda requirement of $270 million, Mr. Petit reported that centers had been encouraged to redistribute resources from complementary to core to support the agreed research agenda. He said the World Bank contribution had been allocated to attain equity among centers, first to reach the $229 million budget for 1994 that was approved at ICW93 and second to fill the gap between the $229 million budget and the $270 million research agenda.

Reporting on 1995 financial requirements and tentative financing plans, Mr. Petit said that preliminary indications received from donors suggested that the $270 million target will be reached, although it was not yet known if the allocation by center will be sufficient. He said the Committee recommended that the 1995 proposals for Center funding be approved, with a note of caution that the total sum may fall short by one or two percentage points. For some Centers (e.g. ICARDA and ILRI), the shortfall may be somewhat higher. Regarding the World Bank contribution for 1995, he said the Committee recommended that 50 percent or $25 million be disbursed on January 1, according to the 1995 Center allocations, with the remaining 50 percent to be disbursed early in the year to fill gaps in funding, with the World Bank acting as a cofinancier.

On the subject of planning for 1996 and beyond, Mr. Petit reported on the Committee’s two recommendations concerning the Ministerial-level Meeting. First, that it be used to generate a strong commitment for long-term funding of the CGIAR. This could be approached through a discussion of the issues faced by decisionmakers when allocating resources between short-term food aid and emergency relief activities and long-term development activities. He said this could lead to discussion of the role of agriculture in long-term development efforts and to the role
of agricultural research and the CGIAR. Second, that the meeting be used to strengthen the support of agricultural research within developing countries, particularly support to NARS.

On the matter of Committee membership, he said this was linked to membership on the Oversight Committee, since members of the Finance Committee are donors not serving on the Oversight Committee; therefore, it would be necessary to wait until Mr. Serageldin had rotated two members of the Oversight Committee before changes in membership to the Finance Committee could be addressed.

**Ad Hoc Evaluation Committee**

An Ad Hoc Evaluation Committee, chaired by Mr. Rob van den Berg, was convened to discuss (1) the IIMI External Program and Management Review and (2) External Review Processes in the CGIAR. Mr. van den Berg reported as follows in plenary on the course of the discussion and on conclusions reached in committee:

1. **IIMI External Program and Management Review**

   - **Mandate.** Issues relating to IIMI’s role in the vast domain of water management research were exhaustively reviewed. While it was recognized that these issues have gained importance in recent years, it was felt that in the current situation, the emphasis should be on stabilization rather than expansion. IIMI’s mandate should remain irrigated agriculture. However, IIMI needs to recognize the broader set of issues and bring these to bear on its areas of focus. Addressing broader issues could be reconsidered in the future.

   - **Governance and Management.** Broad problems identified in the report were examined. Specific concerns included the significant loss of senior staff, and the plans for how IIMI will be managed in 1995 (a search process for a new Director satisfied in general with the Center’s response, and measures being taken by the Board and Management for changes.

   - **Organization of Research.** The difficulties of moving from a project to program-oriented institute were considered. The question of how IIMI intends to increase cohesion between headquarters and field operations was raised, as was the question of IIMI’s approach to research and the importance of clearly defined goals and milestones. The Center agreed with the diagnosis of problems and drew attention to areas of progress, including the adoption of new management techniques.

   - **Gender Issues in Research.** The importance of gender issues in irrigated agriculture was debated, as well as the integration of this topic into IIMI’s research program. The relevant recommendation of the review panel and the answers of Board and Management of IIMI were endorsed.

   - **Recommendation for Follow-up.** The Committee endorsed the Panel’s report and discussed the need for possible CGIAR follow-up to the review. The consensus was that the IIMI Board should follow the implementation of the review recommendations closely and report at ICW95 on the progress made. Such follow-up reporting was considered necessary to encourage the Board and management to move with deliberate speed in generating change in the many areas where follow-up action has been reported as underway or planned.

2. **External Review Processes in the CGIAR**

   The Ad Hoc Committee discussed the progress report of TAC concerning the review process, and was pleased by the progress made. Mr. van den Berg reported that the Committee agreed on the need to ensure the
integrity of external review processes particularly in order to maintain donor comfort with the accuracy and reliability of reviews -- so that donors do not feel the need to use additional resources on setting up their own reviews and evaluations. In general it was felt that this is a very important issue which would warrant further and deeper discussion than time allowed.

As TAC and the Secretariats develop their ideas further on evaluation and impact assessment, they should interact with other initiatives, such as the impact assessment task force of PARC. The Committee was supportive of the general thrust of the report to place more emphasis on board responsibility for monitoring and evaluation. This means that CGIAR external reviews could in future focus more on the effectiveness of internal evaluation processes without eroding the substance and quality of external reviews.

The Committee suggested that the following measures would help in the further development of the external review process:

- some minimum of standardization, to be defined and achieved for internal evaluation processes at centers;
- evaluation of NARS-IARC interactions;
- an independent evaluation unit for the System;
- a common summary format of reporting on evaluation issues.

Mr. van den Berg said the Committee recommended that the experiment with parallel sessions should be continued at future CGIAR meetings.

The Group endorsed the Committee’s conclusions and recommendations.

Livestock Research

The Group decided at its 1994 Mid-Term Meeting (San Juan, Puerto Rico) that livestock research should be entrusted to a single institution with global responsibilities for strategic research in genetics, physiology, nutrition and health. A single, livestock research strategy was expected to incorporate appropriate programs from the existing livestock research centers (ILCA and ILRAD) as well other centers e.g. ISNAR, IFPRI, CIAT, ICARDA, ICRISAT and ICRAF. The decision was based on recommendations from a Working Group led by Mr. John "Taff" Davies (UK) as well as from TAC. The Rockefeller Foundation agreed to serve as implementing agency for the decision.

At ICW94, Mr. Robert Herdt, on behalf of Rockefeller Foundation, and Mr. Neville Clark, Chairman of the board of trustees of the new livestock research center -- the International Livestock Research Institute (ILRI) -- reported that the International Agreement establishing ILRI was signed in Bern, Switzerland on September 21. The new center will be operational by January 1, 1995 as anticipated. The Implementing Agency would therefore relinquish its responsibilities.

The new board had already begun work with the preparation of a Strategic Plan, the 1994-1948 Medium Term Plan, and the 1995 Program and Budget. Mr. Hank Fitzhugh had been selected as ILRI’s first Director General.

The Group expressed its appreciation of the manner in which its decisions were implemented and especially recognized the contribution of:

- The Swiss Government for hosting the signing of the International Agreement establishing ILRI, and acting as its repository. The efforts of Paul Egger on behalf of the CGIAR.
• Neville Clarke, first as chair of the Implementing Advisory Group, and now as the Board Chair of ILRI.

• The management, boards and staff of ILRAD and ILCA for the tremendous level of cooperation and positive support in the transition phase.

• The Rockefeller Foundation as Implementing Agency, in the persons of Robert Herdt and Robert Havener.

ILRI headquarters will be in Nairobi, Kenya and research campuses will be maintained both at the headquarters site and in Addis Ababa, Ethiopia.

**Banana and Plantain Research**

The Group decided at its 1994 Mid-Term Meeting (San Juan, Puerto Rico) that the focus of INIBAP should be on disease-related Musa germplasm and related documentation, information and training; and that these activities should be carried out by a consortium of institutions including INIBAP under the governance and administrative structure of IPGRI. Meanwhile, IITA will continue its banana and plantain crop improvement research.

IPGRI Director General Geoffrey Hawtin reported at ICW94 that the Group’s decision had been implemented. A Memorandum of Understanding was signed by the Board Chairs of INIBAP and IPGRI and the Chair of the INIBAP Support Group during MTM94, providing a framework for implementation of the Group’s decision. The Memorandum protects INIBAP’s program focus as well as its network model.

Following the signing of the memorandum, INIBAP’s Board of Trustees resigned and its functions were taken over by the IPGRI Board which has since appointed an additional member who was previously with the INIBAP Board. The INIBAP program is currently being integrated within IPGRI’s project management framework, Mr. Hawtin said. INIBAP, meanwhile, will retain an identity.

Banana and plantain research will be reviewed as part of the IPGRI external review scheduled for 1996.

**Committee of Board Chairs (CBC)**

CBC Chair John Dillon said that the CBC accepted Mr. Serageldin’s challenge to ensure that boards play their part in the System’s renewal; in making the CGIAR more open, transparent, and responsive to stakeholders, particularly NARS; in ensuring that the CGIAR operates as a system and makes full use of the opportunities available for cooperation and collaboration; and in contributing to the ongoing debate on the System’s operation and development.

Mr. Dillon said Center boards had vastly improved their performance in recent years. In order to further improve board performance, he said the CBC suggested that donors be represented more frequently at board meetings by observers to give boards direct guidance and for donors to better recognize the realities under which boards operate. On other board related matters, Mr. Dillon said the CBC encouraged board chairs to attend MTM95; and that it did not recommend a major reduction in Center board sizes, but preferred a flexible approach, based on an individual Center’s mandate and other circumstances.

Mr. Dillon expressed thanks to those colleagues who will be retiring from the CBC as well as to the TAC Chair. He noted that the new Chair and Vice Chair of the CBC will be Just Faaland, Chair of WARDA, and Bo Bengtsson, Chair of CIFOR.
Center Directors Committee (CDC)

CDC Chair Christian Bonte-Friedheim reaffirmed the CDC’s strong support of Mr. Serageldin and the revitalization efforts currently underway. He said the CDC appreciated Mr. Serageldin's visits to Centers and his willingness to listen and discuss Center problems. The CDC hoped that all donors would ensure that the CGIAR will soon be a healthy and sustainable system.

Mr. Bonte-Friedheim reported on the presentation made to the CDC Subcommittee on Sustainability and the Environment on the outcome of the Zschortau workshop. He said the CDC applauded and endorsed the principle of a stronger, more coordinated effort on soil, water, and nutrient management research, and that CIAT had been designated the lead Center on this issue. He said the CDC supported the creation of a steering committee to help guide the initial steps of the initiative and had made suggestions on its composition. He said the CDC urged all parties to focus on the substantive research agenda and on priorities, and to delay consideration of institutional and governance aspects, which can be taken up in TAC’s forthcoming stripe review on natural resources and the implementation of the system-wide matrix.

On the subject of intellectual property rights, Mr. Bonte-Friedheim said the Center Directors were further reviewing issues of patenting improved materials and biotechnological products as well as the appropriate use of material transfer agreements, and that IPGRI will act as the depository for such agreements from Centers. He said the CDC had endorsed a system-wide information strategy to guide the CGIAR’s future information activities. The CDC had formed an inter-Center working group on information, which as its first priority will strengthen the Centers’ common electronic communications system.

Public Awareness and Resource Mobilization Committee (PARC)

Committee Chair Per Pinstrup-Anderson, Director General of IFPRI, reported to the Group on the activities of the Center Directors Subcommittee on Public Awareness and Resource Mobilization (PARC). He said the first task of PARC was to establish a strategy for resource mobilization and public awareness. To this end, he said a study by Downes Ryan International had been commissioned (see below), which had been the subject of a PARC meeting in August. PARC had determined that without better information on impact and better articulation of that information a resource mobilization/public awareness strategy was unlikely to be effective. Therefore, he said, PARC proposed the establishment of a task force to assess current Center activities on impact assessment, methodologies in use, and data available; determine what kind and level of impact should be assessed; bring together internal and external expertise to develop a system-wide process of impact assessment; link impact assessment with resource mobilization and public awareness; and develop a mechanism to institutionalize the new impact
assessment approach. Mr. Pinstrup-Anderson emphasized that PARC would not itself undertake the assessment of impact, but rather was taking a lead role in implementing an initiative to institutionalize a common approach on impact assessment across the System. Reporting on the study conducted by Downes Ryan International, Mr. Pinstrup-Anderson said PARC proposed to take an experimental approach with regard to the ideas suggested in the report, particularly in relation to the suggestions of how to approach non-traditional donors.

**Presentation by Downes Ryan International**

Mr. Patrick Ryan of Downes Ryan International presented to the Group the findings of the assessment conducted by his company on behalf of the CGIAR on the feasibility of enhancing the System’s resource mobilization and fundraising programs. Mr. Ryan reviewed the two actions recommended in the Downes Ryan report. First, the creation of an entity, such as a CGIAR Foundation, to assist the CGIAR in vigorously applying proven fundraising techniques. Second, encouraging Centers to plan and carry out more organized financial resource mobilization activities through the appointment of fundraising and development staff, the identification of prospective donors, and the application of systematic fundraising plans. Mr. Ryan reported that these recommendations had been presented to PARC and were now being assessed and analyzed by PARC for possible implementation recommendation.

**SPECIAL EVENTS**

**Farewell to TAC Chairman**

The Group unanimously adopted a resolution recording its appreciation of the work done by TAC Chair Alex McCalla who was due to end his term at the end of December. The text of the resolution, printed on a scroll that was presented to Mr. McCalla by the CGIAR Chairman, reads as follows:

"The CGIAR hereby records its appreciation of Alexander McCalla’s efforts and accomplishments as chairman of the Group’s Technical Advisory Committee in the period 1988-1994. His leadership of the committee was characterized by dedication, integrity, and competence. He assisted the CGIAR in reorienting its agenda to encompass both productivity and natural resources management, and in developing an ecoregional framework for agricultural research. His contribution to maintaining scientific excellence at CGIAR centers and ensuring the effectiveness of the CGIAR system as an instrument of development will be remembered with respect."

Mr. Serageldin said that the TAC Chairman’s dominant qualities were his analytical capacity, his ability as a synthesizer, and his enormous sense of humanity. The "real McCalla," Mr Serageldin emphasized, contains within himself a rare blend of compassion and intellect. Mr. McCalla had demonstrated those personal qualities in guiding TAC, in advising the centers, and in helping the Group.

Mr. Mohamed Zehni, speaking on behalf of FAO Director-General Jacques Diouf, presented Mr. McCalla with a medal in recognition of his outstanding contribution to international agricultural research. Speaking on behalf of the CGIAR membership, Oversight Committee chair Paul Egger paid tribute to Mr. McCalla’s wisdom, strength, and strategic thinking.

In his response, Mr. McCalla said he appreciated the affection, respect, and intensity of the farewell commemoration. He drew attention to the support he had received from TAC members as well as the TAC Secretariat, and made a strong plea for TAC’s continuing role as a source of independent advice.
Tributes

The Chairman welcomed those who were attending the CGIAR for the first time in new capacities and paid tribute to those who were leaving their present positions.

He particularly welcomed Colombia, the newest CGIAR member, whose participation strengthens the voice of developing countries at the CGIAR.

Among the well-known CGIAR figures who did not attend ICW94 were Philippe Mahler, the FAO Co-sponsor, and Abbas Kesseba of IFAD.

The Chairman said: "Mr. Mahler is unable to attend ICW94 because of other duties especially entrusted to him by the new FAO Director General, Jacques Diouf, who is also an old friend of the CGIAR. Mr. Mahler is due to retire next year, and I understand he will not be participating in the 1995 Mid-Term Meeting. So it is incumbent on us to say farewell to him in absentia.

"As an agricultural scientist with a strong interest in tropical agriculture, Mr. Mahler gravitated naturally towards FAO where he has had a distinguished career, both in the field and at headquarters. Mr. Mahler has supported the CGIAR in many capacities. He was the Executive Secretary of TAC from 1976 to 1982 and has been the FAO representative at the CGIAR from 1990 to the present. We have benefitted from his wealth of knowledge, his diplomatic skills, and his strong commitment to the mission of the CGIAR. Mr. Zehni will no doubt convey these sentiments to him, but I would, as well, request the Executive Secretary to prepare a more formal communication expressing the Group’s appreciation of Mr. Mahler’s role and effectiveness.

Mr. Serageldin informed the Group that Mr. Kesseba, who represented IFAD at the CGIAR for many years, would no longer be the IFAD representative. On behalf of the Group, he congratulated Mr. Kesseba on his new assignment and thanked him for his long service to the CGIAR. "His support was strong and his insights were invaluable," Mr. Serageldin said.

Mr. Serageldin said farewell to several Board Chairs and Center Directors who will be relinquishing their positions:

**Board Chairs**

Lindsay Innes (CIP), Gerry Helleiner (IFPRI), Eric Roberts (ICRISAT), Wally Falcon (IIRI), Ole Nielsen (ILRAD), Dieter Bommer (ILCA), Nicole Senecal (ISNARI) and M. S. Swaminathan (IIMI)

**Center Directors**

Donald Winkelmann (CIMMYT), Nasrat Fadda (ICARDA), Robert Lenton (IIMI), Hank Fitzhugh (ILCA), Ross Gray (ILRAD) and Klaus Lampe (IRRI).

**Presentation of 1994 CGIAR King Baudouin Award**

The biennial CGIAR King Baudouin Award was presented by CGIAR Chairman Ismail Serageldin to IITA Director General Lucas Brader in recognition of IITA’s pioneering research on breeding hybrid plantains resistant to black sigatoka— a devastating leaf spot disease of banana and plantain (Musa spp.) that is generally considered to be the most serious constraint to Musa production in Sub-Saharan Africa—and for advances made in the genetics of Musa.

Black sigatoka could not previously be tackled by research because the crop was unresponsive to classical breeding methods due to its almost complete sterility. A breakthrough in Musa breeding technology, achieved by IITA using techniques involving basic, strategic, and
applied research, resulted in the development of hybrid plantains resistant to black sigatoka. In the process, more insight was gained into *Musa* genetics, resulting in the emergence of new breeding strategies for the improvement of bananas and plantains. In its research, IITA collaborated with twelve national agricultural research systems in Sub-Saharan Africa and Latin America as well as with INIBAP and a number of advanced laboratories in Belgium and the USA.

Following the presentation of the award by Mr. Serageldin and its acceptance by Mr. Brader, Belgian Ambassador André Adam, Belgian Ambassador to the USA, addressed the Group. He reaffirmed the strong interest of the Belgian royal family in the research activities of the CGIAR, and congratulated IITA on receiving the award for its research on banana and plantain—one of the priority areas identified for special support by Belgium. He indicated that Belgium has provided financial support to IITA’s banana and plantain improvement program, as well as to INIBAP, and that a number of Belgian scientists and research institutions have collaborated on these research activities.

**Launch of Feeding and Greening the World**

Mr. Derek Tribe, Executive Director of the Crawford Fund for International Agricultural Research in Australia, addressed the Group on the launching of his new book *Feeding and Greening the World*. Mr. Tribe expressed his thanks and gratitude to all those present who provided assistance to him during the writing of the book. He indicated that his was not another doomsday book, but rather a cautiously optimistic assessment of the global community’s ability to change, adapt, and move forward to overcome doomsday predictions. The book, he said, argues that measurable progress is being made, but too slowly, that ignorance remains a stumbling block, and that the new knowledge that is needed can only come from the global research network—NARS in the North as well as in the South, NGOs, international agencies, the CGIAR Centers, and national agencies set up in the North to assist development in the South. Mr. Tribe also made the point that everyone—both farmers and consumers in the North and South—gains enormously from the knowledge generated by this global research network; however, the rate of expansion of knowledge is being restricted by a lack of funds, because governments and international agencies have failed to recognize the need for it.

**Vision 2020 Initiative**

IFPRI Director General Per Pinstrup-Andersen, providing the Group with a progress report on IFPRI’s Vision 2020 Initiative, said that there is very little agreement on future trends related to food, agriculture, and the environment. Information ranges from extreme optimism to extreme pessimism, making it difficult for decisionmakers to use available information. Complacency characterizes most decisionmakers, which has resulted in severe cuts in the support of agricultural development in low-income developing countries. Yet, he said, IFPRI’s research shows that poverty eradication, sound utilization of natural resources, and economic growth in low-income developing countries must happen through agriculture. Failure to invest in agriculture will result in failed economic growth in those countries. IFPRI’s 2020 Vision Initiative, Mr. Pinstrup-Andersen said, is an attempt to bring the expertise, knowledge, and empirical evidence IFPRI has accumulated over the last 20 years to bear on the debate and on decisionmaking.

Mr. Pinstrup-Andersen reported on the five areas of activities covered by the 2020 Vision Initiative: analyzing and seeking consensus on a number of aspects related to food, agriculture, and the environment; sponsoring and organizing technical and regional workshops to present and discuss research results; stimulating debate on and awareness of
issues through newsletters, information briefs, and meetings; convening key groups that can influence future trends in food, agriculture, and the environment, including senior policymakers, government officials, leaders of international organizations, and experts; and, disseminating the results of this work through country-specific symposia, press briefings, and other activities, including educational activities, during 1995–96.

A next major event, he said, will be a meeting of the Vision 2020 Advisory Committee, to be hosted by SAREC in Sweden just prior to the CGIAR Ministerial-level Meeting in Switzerland, at which a draft vision will be discussed with a view to moving informally toward a shared vision and consensus on action.

Desertification Convention

ICRISAT Director General James Ryan reported to the Group on the Desertification Convention, at which ICRISAT represented the CGIAR. Mr. Ryan related the history of developments leading up to the convention, beginning in 1974, when the UN General Assembly approved concerted efforts to combat desertification, which culminated in the 1977 UN Conference on Desertification (UNCOD) that produced a twenty-year action program. Desertification became a major program area in Agenda 21 of UNCED, he said, following recognition that desertification continued to afflict many millions of people and that UNCOD’s plan of action had minimal impact.

Mr. Ryan reported on the five negotiating sessions held by the Inter-Governmental Negotiating Committee for a Convention on Desertification, and ICRISAT’s participation in the first three of these on behalf of the CGIAR, as well as ICRISAT’s representation of the CGIAR at the signing ceremony of the convention document held in October in Paris. ICRISAT ensured that delegates to the convention were made aware of the research and related activities of CGIAR Centers pertaining to marginal rainfed lands of the developing world. At the signing ceremony, ICRISAT made a statement that included in part an indication that the ecoregional initiatives of the CGIAR position the Centers to respond to the imperatives of the convention. The most important outcome of the convention, Mr. Ryan said, was the international attention that has been mobilized around the problems of drought and desertification. Another benefit of the convention, he said, was the recognition by many governments that a participatory approach in the development of national action programs is a pre-condition to successful results. There was also recognition among policymakers of the importance of incorporating socioeconomic dimensions into action programs.

Mr. Ryan reported and expanded on articles of the convention which are of particular significance to the CGIAR and briefed the Group on ICRISAT’s desert margins initiative to bring together Centers, national research systems, non-governmental organizations, and regional institutions to focus on the problems of drought and desertification, particularly in Sub-Saharan Africa. ICRISAT, he said, will be hosting a joint workshop with ICRAF in January 1995 to plan for the implementation of the initiative.

Population Conference

IFPRI Director General Per Pinstrup-Anderson reported to the Group on the Conference on Population and Development held in Cairo in September, at which IFPRI represented the CGIAR. He highlighted three areas as examples of the ways in which IFPRI interacted with the UN Population Fund in both the preparation for and execution of the conference. First, IFPRI hosted a roundtable on population and food in February 1994 which brought together over thirty technical experts from around the world and from a range of
disciplines. Recommendations resulting from the workshop were presented at the third prep corn meeting for considered inclusion in the draft program of action for the conference. Second, IFPRI delivered a statement at the second prep corn meeting on population and food security nexus. Third, at the conference in Cairo, IFPRI gave a plenary presentation, in which it emphasized the availability of adequate quantities of food at prices people can afford as a critical determinant of population growth, particularly among the poor, as well as increasing incomes of the poor as a necessary condition to lowering fertility rates. IFPRI also emphasized to delegates that a sustained increase in crop yields—key to food production in developing countries—requires investment in research, education, extension, and training of farmers along with investments in rural infrastructure. Research on appropriate technology for marginal areas must be vigorously pursued, along with efforts to attain sustainable food and agricultural production through improved resource management and institutional reform.

**Future Meetings**

The following dates and, where applicable, locations were confirmed:

*International Centers Week*

1995 -- October 30-November 3  
(Washington D.C.)

1996 -- October 28-November 1  
(Washington D.C.)

1997 -- October 27-31  
(Washington D.C.)

*High-Level Meeting*

1995 -- February 9-10 -- Lucerne, Switzerland.

*Mid-Term Meetings*

1995 -- May 22-26 (location to be announced)  
1996 -- May 20-24 (location to be announced)  
1997 -- May 26-30 (location to be announced)

**Conclusion**

Mr. Serageldin brought the meeting to a close with a summary assessment of what had been achieved. He thanked all participants for their insights, and all involved in organizing the meeting for their competence. (For the full text of the Chairman’s Closing Statement, see Annex III.)
INTERNATIONAL CENTERS WEEK 1994

October 24-28, 1994

DRAFT AGENDA

Monday, October 24

SCIENCE FORUM

MORNING

Science Capacities in the Developing World: The Realities
Opening Address by Ismail Serageldin, CGIAR Chairman

Science and Development: Personal Thoughts
Special Address by M. S. Swaminathan

Science in Developing Country Agricultural Research: Biotechnology - Opportunities for Brazil
Luiz Antonio Barreto de Castro
Special Representative of the Minister of Science and Technology, Brazil
Discussion

Taking Stock: Where We Stand
Panel Discussion

Chair: Donald Winkelmann, CIMMYT
Discussants: Mohamed H.A. Hassan, Third World Academy of Sciences
Cyril Ponnamparuma, The Third World Foundation
Michel Petit, The World Bank
Andrew Steer, The World Bank
A Global Research System for Agriculture and the Environment

Panel Discussion

Chair: Klaus Lampe, IRRI
Discussants: Wanda Collins, IPGRI
Uma Lele, University of Florida

AFTERNOON

Building National Science Capacity: The Role of External Support

Panel Discussion

Chair: C. Bonte-Friedheim, ISNAR
Discussants: Johan Holmberg, SAREC
Tim Rothermel, UNDP

Tomorrow’s World: Trends in Science

Presentation by Gordon Conway, Vice Chancellor, Sussex University

Towards an Action Program: Summing Up

Ismail Serageldin, CGIAR Chairman

COFFEE BREAK

CGIAR BUSINESS MEETINGS

Special Presentations

Vision 2020 Initiative
Progress Report by P. Pinstrup-Andersen, Director General, IFPRI

Desertification Convention
Report by J. Ryan, Director General, ICRISAT

Population Conference
Report by P. Pinstrup-Andersen, Director General, IFPRI
Presentation of 1994 CGIAR King Baudouin Award
Announcement by Alex McCalla, TAC Chair
Presentation by CGIAR Chairman
Response by Recipient of Award

Daily Audiovisual Presentation

- *CIP - Defeating Potato Weevils--A High Altitude Success Story*
Tuesday, October 25

MORNING

Launching the New CGIAR

1. Adoption of ICW Agenda
2. Chairman’s Statement - A Progress Report
   Discussion
3. The Research Agenda
   A. McCalla/TAC Chair-designate D. Winkelmann
   M. S. Swaminathan, Chair, Stakeholder Panel
   Discussion

Daily Audiovisual Presentation

- IFPRI - Triage model adapted to famine prevention in Ethiopia

AFTERNOON

4. Future CGIAR Governance
   Report of the Study Panel: Andrew Bennett
   M. S. Swaminathan, Chair, Stakeholder Panel
   Paul Egger, Chair, Oversight Committee
   Discussion
Wednesday, October 26

**MORNING**

- **Launching the New CGIAR** *(cont...)*
  5. New Financing Strategy
     - Chairman’s Presentation
     - Report of the Study Panel: Andrew Bennett
     - Views of the Finance Committee: Michel Petit,
       Chair, Finance Committee
     - Discussion
  6. 1994 Stabilization Program
  7. 1995 Program Approval and Pledging
  8. 1996 Program Directions
     - Discussion
  9. Planning for High Level Meeting

**Daily Audiovisual Presentation**

- IRRI - Towards 15 tons of rice--no longer a dream

**AFTERNOON**

- **Systemwide Programs in the CGIAR**
  10. Implementing a CGIAR Genetic Resources Program
      - FAO Agreement: CGIAR Chairman
      - Signing of FAO Agreement
      - Follow-up to MTM94: G. Hawtin, Director General, IPGRI
      - Report of the IPR Panel: M. S. Swaminathan, Panel Chair
      - Discussion
  11. Livestock Research in the CGIAR--Establishment of ILRI
      - Report of Implementing Agency: R. Herdt, Rockefeller Foundation
      - Report by the Board Chair: N. Clarke, ILRI
      - Discussion
12. Systemwide and Ecoregional Initiatives

Introduction: TAC Chair
Alternatives to Slash and Burn: P. Sanchez, Director General, ICRAF
Rice/Wheat Based Cropping Systems: J. Ryan, Director General, ICRISAT
Central and Latin American Hillsides: R. Havener, Director General, CIAT

Discussion
Thursday, October 27

MORNING Business Matters

13. Technical Advisory Committee  
   TAC Chair’s Report  
   Citation to Retiring TAC Member

14. Report of the Committee of Board Chairs

15. Report of the Committee of Center Directors

16. Public Awareness  
   Report of PARC: P. Pinstrup-Andersen, Committee Chair  
   Launch of "Feeding and Greening the World" by Derek Tribe  
   Report by Downes Ryan International  
   Discussion

17. Implementation of CGIAR Decision on Banana and Plantain Research  
   Status Report: G. Hawtin, Director General, IPGRI

Daily Audiovisual Presentation

- CIAT - Seeds of hope for Rwanda

AFTERNOON Parallel Meetings of Standing Committees and Ad Hoc Evaluation Committee

Oversight Committee

Finance Committee

Ad Hoc Evaluation Committee:  
   IIMI External Program and Management Review  
   External Review Processes in the CGIAR
Friday, October 28

MORNING  Business Matters (cont...)  

18. IIMI EPMR  

   Report by Chair of the Ad Hoc Evaluation Committee:  
   Rob D. van den Berg  
   Discussion

19. Report of the Oversight Committee: Paul Egger, Chair

20. Report of the Finance Committee: Michel Petit, Chair

21. Results of Pledging Session: CGIAR Chairman

22. Future CGIAR Meetings: CGIAR Executive Secretary

23. Other Business  
   Soil, Water and Nutrient Management - The Zschortau Plan

Daily Audiovisual Presentation

   • IIMI - "Mihi Diya"

AFTERNOON  Launching the New CGIAR

24. Review of Conclusions, Decisions, Next Steps

Closing

25. Chairman’s Statement

/1  Daily 10-minute audiovisual presentations by centers are an initiative  
   of the Public Awareness Association, in cooperation with the Center  
   Directors’ Public Awareness and Resources Committee (PARC).
CHAIRMAN’S OPENING ADDRESS

Ladies and gentlemen, since we last met in New Delhi, much has happened in the CGIAR, and I am happy to report that almost all of it has been good. It enables me to stand before you today and say that the spirit of New Delhi is still with us and that we are well on our way to realizing the ambitious reform program we set for ourselves last May when we launched a process of renewal and sent a signal to the System that, while the donors will support the CGIAR, it will not be business as usual.

I have now had the privilege of visiting sixteen of the seventeen centers, and I plan to visit the last center before too long. I emphasize the word "privilege," for the men and women that I met at these centers are truly exceptional. They are not only outstanding scientists; they are enthusiastic, dedicated individuals, fired with a sense of mission, and are an asset that cannot be quantified. In all of the nine centers which I visited following the Mid-Term Meeting, the message of New Delhi had been well received, and what a difference the signal from New Delhi has made on the morale of staff. I am more convinced than ever before that the CGIAR will remain an outstanding instrument of agricultural research and that it will rise to the daunting challenge we have set for ourselves, that of sustainable agriculture for food security in the developing world.

Let me review what has transpired since the Mid-Term Meeting. First, the World Bank has agreed that the actions taken at New Delhi justified releasing the full financial package in support of the program I announced at the Mid-Term Meeting, including the additional $20 million to match contributions by other donors on a 1-to-2 basis. These funds are currently in hand and are being disbursed in accordance with procedures set up by the Finance Committee.

Second, traditional donors have been very generous, as have new donors to the System. We have received over $19 million in additional and retargeted funds in 1994, which automatically triggered over $9 million from the World Bank’s new matching facility. In addition, new donors have joined the CGIAR, namely Russia and Colombia, and their contributions will also be matched by the Bank on a 1-to-2 basis.

Third, centers have been very active in restructuring programs that previously were outside of the agreed research agenda, to bring some of these activities back into the agreed research agenda. This comprises part of the match. I would like to thank CIP and WARDA for their spirit in supporting the whole System by retargeting more complementary funds than originally estimated, thereby releasing World Bank funds for the System as a whole, even though they themselves did not benefit from these matching grants.

Based on the above three items, I am pleased to report that we have successfully closed the financial gap in 1994, and the centers will have a fully-funded program this year. We have also received encouraging signals for 1995 which have enabled us to prepare a budget based on the $270
million research agenda. I hope this will be essentially finalized this week and that we can act upon it with decisiveness before December. I remind you, the centers must start 1995 with a clear budget and a clear mandate.

For this International Centers Week (ICW), we have set three major tasks for ourselves. First, to stabilize funding for 1994 at the $270 million program level. This has been achieved. Second, to establish a viable budget for 1995 based on the program and center matrix we agreed upon in New Delhi. Third, to prepare a manifesto for submission to the ministers and heads of agencies at the Ministerial-Level Meeting, which is intended to recapture the spirit of Belaggio. I am happy to report that the Government of Switzerland has kindly agreed to host the meeting in Lucerne on February 9 and 10, 1995. Our next target date for the 18-month program to revitalize the CGIAR is now firmly before us and we will need to build on the discussions of these ICW meetings to make it a real success.

Clearly, there are a large number of additional aspects of both the vision statement and the current research agenda that must be highlighted. First and foremost is that the CGIAR is not functioning without reference to the work of others, be they industrialized countries, developing country national agricultural research systems (NARS), the private sector, or non-governmental organizations (NGOs). The work of the CGIAR is increasingly connecting with the work of others, adding value based on the CGIAR’s comparative advantage and making the whole more than the sum of its parts. Second, inter-center collaboration within the CGIAR is also increasing, moving us ever closer to the goal of a systemwide approach, without compromising the tenets of center independence. Third, there is a great deal of interaction between centers and their host country NARS, partly translated by the presence of Colombia among us due to their appreciation of CIAT.

Much more remains to be done, and I would like to share with you some profound concerns about what needs to be done. We have to recognize that the scientific enterprise is moving from the location-specific focus on particular institutions toward the sharing of ideas through networks, collaborating scientists working on particular programs, and networks transcending disciplinary as well as geographic boundaries. This should be increasingly reflected in the CGIAR centers, which as centers of excellence must become more and more important as loci for networks linking the North and South. It is a vision that must guide our steps as we think of the collaboration required, the design of the research agenda, and the modalities for its implementation.

Efficiency and effectiveness have to be the watchwords for everything we do. This requires that we improve the workings of our meetings and deliberations. I have suggested that we should consider a more flexible and interactive format for our ICW meetings that relies less on the use of plenaries and more on smaller break-out groups, and we will experiment with this on Thursday afternoon. I hope from that experience we can design a better and broader system of participation at the next ICW.

Meetings in this time of rapid change must be purposeful and lead to decisions, but they also must remain a tool for forging a consensus and promoting stronger links among all stakeholders in the system. They must be designed in both content and format with this in mind. I urge you to think about that not only in terms of what we are going to do here but in terms of changing the culture within the System. While we must protect the legacy of the CGIAR, we have to recognize that the CGIAR, despite its excellence, remains a somewhat inbred group, inbred in the sense that we rely frequently on very much the same network of people, those who are currently working in the System.
as well as the roughly 1,000 or so persons that are associated with the System. Reaching out beyond the System is an integral part of achieving the vision that we launched together in New Delhi. It is not easy; the Bretton Woods institutions have a similar problem. They have it for many of the same reasons that the CGIAR has it, because first and foremost, there is a gravitational pull. Institutions such as the CGIAR represent such a critical mass of talent and expertise that it is difficult to go outside of them and there is a natural tendency to look within. Second, we must recognize that there are transaction costs that exponentially rise the more you bring in other and additional partners, and frequently the dividends of bringing in additional partners are not obvious in the short- to medium-term. Third, there is the inertia of well-established routines. Fourth, there is the long lead and lag time in dealing with institutional change and the content of the research agenda.

The analogy of the supertanker has been used. We will accept that change is not something that will happen overnight, but I think we must dedicate ourselves to bringing about openness and cultural change and outreach, or else much of what we have said about the budget matrix will remain just procedural and will not translate into its full effectiveness. For a supertanker to turn around is not as easy as for a speed boat. It takes time. The question is, do we know clearly the direction we want the supertanker to turn? I believe we do.

First, we do, in recognizing that the research agenda must focus on the broader nexus of environment, agriculture, and poverty as the basis for the vision of sustainable agriculture for food security in developing countries. Environment and poverty reduction are, therefore, not add-ons to production increases but are central parts of the mandate. Second, we do know that we want to go in a direction where the CGIAR as a System is more than the sum of its parts. Third, we recognize that, if the CGIAR represents three to four percent of total expenditures in agricultural research, then we must be concerned with the other 96 to 97 percent and work with it and beyond to the farmers themselves, whose contributions are not being factored into this budgetary exercise. Dr. M. S. Swaminathan and Dr. Gordon Conway both reminded us yesterday of the image of a molecular biologist working with a farmer, the idea of a link between the ultimate beneficiary, the ultimate repository of traditional wisdom and insight and the best that contemporary science has to offer. Fourth, we know that we want to build partnerships and outreach. It is no longer just desirable, it is essential to bring about the execution of that tripartite mandate. Internally, if we want the whole to be more than the sum of the parts, we must build partnerships among centers. Externally, we need to recognize the involvement of the ultimate beneficiaries, the farmers, otherwise we will not be able to reach out to the 96 or 97 percent of the rest of the work being done.

This requires a different perception of our roles, both as centers and as people within the centers. As the stakeholders of the System as a whole, we have to recognize that what we are talking about is profound cultural institutional change. The change of the institutional culture that has governed the CGIAR requires four sets of related activities that must proceed in parallel and in a mutually-reinforcing fashion. First, the breaking down of barriers between different disciplinary specialists and between functional units of the System. This has to be achieved by a series of procedural and structural steps, of which the re-engineering of cross-unit processes such as the systemwide initiatives or the budget matrix are but examples. Second, redefining the role of the different actors in the System so that each part of the System operates as a member of a team, and to empower responsibility and decisionmaking at every level of the System. Let me emphasize, we do not want to weaken the centers or the donors or the TAC. We want each player to be stronger than ever before, but to behave as members of a team. A team composed of strong players is always better
than a team consisting of weak and compliant players. The key is the promotion of the team spirit. Third, a common set of values for all of the actors in the System and, related to that, developing a shared vision. This is what we are forging in this collective effort at designing the vision and structure of the future CGIAR. Fourth, an unprecedented degree of openness and trust among the different actors at all levels of the System, and between the System and the outside world of which the System must become an integrated part.

I would like to review briefly what we agreed on at the Mid-Term Meeting, summarize where we are, and conclude with where I think we should be going toward the implementation of our vision.

I mentioned the CGIAR’s unique legacy. When I joined the CGIAR in January of this year, I was struck, as I think many of us in the development profession have been, that the CGIAR is a unique achievement. It is a unique achievement because of four characteristics that set it aside from practically any other effort in international development in the past quarter-century. First, the CGIAR is totally non-political. It is not related to the policies of the governments that host centers. It is a commitment that is totally non-political. Second, there is an unremitting dedication to excellence and quality. People are where they are because they are recognized by their peers for the quality of their work. There is no other institutional arrangement where there is so much peer review, type review, technical review of the quality of work, and insistence on quality. Yesterday’s King Baudouin Award showed one example of the excellence of that work.

Third, the CGIAR has had a focused agenda, an agenda focused on agricultural research. It was not an all-purpose development tool; it was not all things to all people. This enabled the CGIAR to bring to bear the talent that it has toward that perspective. Fourth, there has been a long-term commitment, a recognition that it takes eight to twelve years to produce a new plant variety, that there is a long-term effort required to deal with these kinds of problems. It is essential to protect these aspects of the CGIAR’s legacy as we move forward in a period of renewal. Fifth, which I discovered to my surprise only when I became Chairman, is that the CGIAR does not legally exist — there is no legal persona, there is no memorandum of understanding, no statutes, but it works. It is a unique achievement to have had an international collaborative effort function for almost 25 years exclusively on the goodwill of its participants. This is a valuable legacy that must be nurtured and maintained. I want us to recognize that so that we are very clear that in a period of change we must not throw out the baby with the bath water.

How did the current situation develop and where will the problems lie? Initially, a request was made by the donors to the centers of what the priority research agenda would be to address the problems in the next decade or so, and the centers in an unconstrained fashion gave an agenda that exceeded $400 million. They were asked to constrain the research agenda, and the constrained figure came out to $318 million. Subsequently, the donors asked TAC to try to bring it somewhere between $200 and $240 million. TAC reviewed it and recommended $280 million, saying that at the margin TAC could not agree to $240 million, but at the margin if there were additional savings on a systemwide basis, the figure could be brought down to $270 million. That became the origin of the definition of needs as $270 million, or the basic research agenda as $270 million. As you will note, I am careful not to use the word "core agenda" so as not to confuse it with "core funding." We had something called core funding and complementary funding, and to my surprise I discovered that we had $290 million, which in theory not only funds the whole $270 million, but gives us $20 million to spare.
So why did we have a financial problem? Part of the reason is that, while $220 million was going toward the approved agenda (actually, this figured turned out to be $215, but it does not change the logic), parts of complementary funding were going outside of the agreed research agenda, with a resulting gap of $30 million in each of 1994 and 1995. The matching formula that the World Bank proposed came in to help bridge this gap. This was the situation in New Delhi. More important was to recognize that the System that had served us so well for twenty-one years in a growth mode worked against us when there was a retrenchment. For example, the World Bank’s co-financing formula, a burden-sharing formula of 15 percent, worked well when the CGIAR was in a growth mode, but as the CGIAR moved in the other direction, the Bank would become part of the problem because it would reduce its funding in proportion to that of other donors rather than filling the gap. Therefore, we needed to rethink some of the aspects that had brought us to this point, with the resulting 18-month timetable of action that was presented and adopted at New Delhi. First was the establishment of a shared approach. Financial stabilization and elaboration of the vision statement was done largely in the summer of 1994. Now we want to formally adopt some proposals during this ICW to lead us to the Ministerial-Level Meeting, at which we want to re-capture the spirit of Belaggio and get a commitment by high-level policymakers that this is indeed the direction they want to go and that the CGIAR is a tool that they would like to use to address some of the fundamental problems of humanity.

Based on the Ministerial-Level Meeting, we will define and adopt changes in the instruments, including the research agenda; at the Mid-Term Meeting in 1995, elaborate on the research agenda; the financial plan in the summer of 1995; adopt everything, new agenda, the budget program in October of 1995; and the renewed CGIAR becomes fully effective in January 1996.

We said that on top of that, we had to start in New Delhi with sending a strong signal. The signal was of two parts, that the donors indeed do support the CGIAR, and that it will be no more business as usual. As I said, that signal has gone throughout the System and, I am happy to report, with good results.

The Bank’s financial package was a one-time conversion of debt of $5.6 million through a grant, a waiver of the 15 percent rule. The maximum commitment of $40 million for 1994 and 1995, regardless of what core funding was; the support for the CGIAR and TAC Secretariats to continue at current levels for 1994 and 1995; the bridging of the $60 million shortfall by committing one-third of it or $20 million, subject to matching contributions from other donors; to change henceforth the participation of the Bank from 15 percent of the core funding to 15 percent of the funded research agenda, thereby recognizing that some donors will not be able to provide all their funding in terms of core, and as long as it is part of the research agenda, we should be willing to provide 15 percent of the total; and that this may lead us to contributions beyond the $40 million ceiling if the agreed agenda and the funded agenda so justify it. To do so, we need to promote more changes for transparency, accountability, and predictability of the funding and research agenda of the System.

This has been achieved, and we have a series of watchwords that have come out of New Delhi that have governed much of the discussion during the summer and must continue to govern our discussion here and in the future. The watchwords are transparency, accountability, and predictability. The budget matrix is just one tool to achieve that. Second, efficiency and effectiveness right across the board in everything that we do and how we use the funds available to us. Third, recognizing that we must maintain both donor sovereignty and center independence, these are parts of the CGIAR’s legacy. Fourth, the CGIAR System is a system where the whole must be more than the sum of its
parts, and we must recognize the role of others, build partnerships, and focus on the comparative advantage of the System, which is long-term international public goods research. These are the watchwords that we set for ourselves in the process of renewal as we reaffirm a mission of the CGIAR, which was presented and adopted in New Delhi in the excellent paper presented by the panel led by Dr. Gordon Conway that had been organized by the Oversight Committee. Sustainable agriculture for food security in developing countries becomes the short label for the themes that undergird it.

We did not say that all problems and topics are suitable for agricultural research, but some are. We said that, like IFPRI's 2020 Vision initiative, the subset of that becomes what the Conway panel defined as the vision and the subset of that gets translated into programs from 1 through n, where a number of actors are present -- OECD, CGIAR, NARS, NGOs, private sector, regional institutions, and others -- and different actors are doing different things. We must position the CGIAR in recognition of what these different actors are doing, frequently building bridges and partnerships with them as appropriate. However it is done, we have a vector which becomes the CGIAR contribution, which may be 3 to 4 percent of the total, and that contribution then becomes the way with which we work with others.

Whatever the definition of that 4 percent, it becomes the total contribution of the CGIAR. That research agenda, which is defined in a series of programs, does not exist in limbo. It is implemented through the centers; therefore, we have within the System a way of saying which parts are executed by individual centers, which parts are executed across the System, which parts are executed between two centers or more. One could map the centers across the row (of a matrix), map the programs across the columns, and at the total have the content of the CGIAR program and across have the center-by-center budgets that make up the total activity of the CGIAR. That was the logic of the budget matrix which we accepted and we said this becomes a tool by which we introduce transparency and accountability in the System.

We have to recognize that not everything can be programs 1 through n, and we must recognize that all the centers have fixed overheads, which have to be funded. These vary in three parts, one of which is statutory. You have a board of trustees, a director general, and administrative financial officers. Whether it is a small center or a large center, these are pretty much fixed. Second, there are administrative overheads in the general sense which one would like to reduce. Third, there are quality enhancements, which are now still lumped as overheads, including peer reviews and stripe reviews, and these one should be very careful not to try to reduce.

Above and beyond fixed overheads, you have a second vector that is really unprogrammed or unconstrained research. No center can function with every single penny preprogrammed for a predetermined activity. Not only do we need to leave some room for flexibility, for uncertainty, but we also must recognize the need for managerial economy to be translated in this fashion. Whatever the content of that activity, it must also include a piece of variable overhead, and this is an essential part. We have fixed overheads and we have variable overheads. As more activities are added, there are transaction costs that come with them, and donors must recognize that in individual cells, while there is a program cell, there is also a piece of overhead, variable overhead, that will go with it, and this gives us the ability to have a total budget that includes both the overheads appropriately distributed by activity, by center, as well as the fixed overheads and the unprogrammed research.
Then came the question of how to fund the two additional programs, the fixed overhead and the unconstrained overhead? Based on the logic of the package that the Bank has presented, the Bank's contribution will be 15 percent of the total agreed research agenda available for distribution across centers and across programs as needed; therefore, the Bank continues to provide funding without any restriction to the System as a whole. Other donors may wish to fund individual centers. Some donors are funding programs, like genetic resources or ecoregional activities across the centers that execute the programs. Other donors may wish to fund particular cells of the matrix, a specific activity in a specific region. As long as it is within the agreed research agenda, it is acceptable and matched by the Bank in its 15 percent. For each donor, we should be able to create a matrix that looks like this: the total contribution of the donor translated into cells with its distribution thematically and across centers as appropriate. If we think in terms of a series of overlays of this matrix, we then have the financing plan for the budget. It goes through two iterations. The reason is to ensure that we do not have particularly faddish or fashionable cells that are oversubscribed and other cells that we have agreed collectively as donors that need to be there which are underfunded. We should be able to anticipate this by having an up-front financing plan which translates into a work program for the centers with a budget.

We have three basic objectives for this ICW: to close the financing gap for 1994, establish the budget for 1995, and establish a framework for the Ministerial-Level Meeting in February 1995. I mentioned earlier that the financing plan for 1994 was fully funded. This table, which had been prepared a few weeks ago, is now out of date. That figure, which was $263 million with the remainder of the balance being the systemwide programs that TAC considered were not yet ready for funding having moved into 1995. That figure has now been upped by $2 million, so we are really moving along there to fully closing the gap.

More importantly is where are we moving toward the Ministerial-Level Meeting. The pieces of paper that you have before you cover a basic set of five documents. One is a short Overview document. I hope it will be about ten pages, which we expect all of the ministers and heads of agencies to read. It should have about five pages on the vision, roughly two pages dealing with the research agenda, two pages on the governance of the System, and a page on financing. The overview will be supported by four specific documents in more detail, each of which runs anywhere between fifteen to twenty-five pages. The first of these, the Vision Statement, is now complete. This is the report from the Gordon Conway panel that was presented in draft form in New Delhi, discussed there, and has now been finalized. The others are all works in progress. The research agenda document that you have before you has some limitations and shortcomings. As I see it, it really sums up where we are today, and that is very good. I would like to thank those that labored very hard to put it before us today. They carried us so far so quickly.

What is missing is a greater ability to define what is really meant by sustainable agriculture and how does that translate into a researchable set of activities, and what is meant by ecoregionality. A buzzword, no doubt, one with which many of the centers have been struggling in different ways, and around which there is no consensus. How are we going to get there? I do not think we can get there within the next few days or even few weeks, but I believe that we should set the process in motion that we can report on as being underway by the time we get to the Ministerial-Level Meeting. I would like to propose that we establish two panels to deal with each of those topics and provide a contribution, and the panels will draw membership from TAC, centers, and outside of the System. We have been well served by the Gordon Conway panel and I think we would be well served by having
additional input as well as one way of dealing with that issue. It is not the only way. Recall that we said that the research agenda should be defined as a function of what is happening across all of the broader 100 percent. That requires listening to the NARS and involving them in the setting of the priorities and the agenda.

Therefore, if we want a link between the research agenda and governance, which you have heard me say time and again that it is the research agenda that should drive the System, not the other way around, setting the agenda would start with initial discussions which we are beginning to have right here, on how to translate the Vision Statement into a research agenda, which we hope will lead to the agenda to be implemented in January 1996. We will, in addition, have a global forum in mid-December being organized by IFAD in Rome which will be a NARS-based meeting.

We then have the Ministerial-Level Meeting in February, which also is a major input into the refinement of the vision leading to the research agenda. From March through May, we will have TAC-center interaction, taking on board these inputs, translating that into a research agenda for 1996 that will be submitted for review in May of 1995, so that the Mid-Term Meeting becomes the meeting at which in-depth discussion on the research agenda can take place. At this point the content and financial implications of the research agenda are reviewed by the CGIAR and subsequently approved by the CGIAR in principle, leading to action by donor agencies to initiate allocations. Between May and October, we finalize the financing plan and start International Centers Week with a very brief session on finalization of the plan for the following year, basically an endorsement of what was discussed, maybe with fine tuning as required over the summer discussions, and we initiate the process for the following year as we proceed.

Fifty percent of the financing of the agenda would be available by December, so that on January 1, the centers can start, not only with a given budget -- and this is how predictability starts coming into the system -- but with 50 percent of the cash in hand, with the other 50 percent to be provided before June. Without that, we will not be able to have a properly functioning system where management responsibility can be positioned in the centers to execute an appropriate program. Therefore, it is absolutely essential that this be done over this time period. We can see that there is a process which links the design of the agenda and in which this meeting is only one part, and that process leads us directly into the governance issue on which we have the results of the Klaus Winkel panel.

At this stage, I would like to go back to our mission statement. It is very important to go beyond the budgets, the matrices, the processes, and the programs. We have to remind ourselves that this mission statement really is all about people and that we are very much engaged in a very noble enterprise. I would hope that the spirit and the enthusiasm and the missionary zeal which I found in the centers among the researchers on the front line can be found in this kind of gathering rather than being exclusively fired up with the administrative minutia which we have to face. It is about people. It is about recognizing not only people, but an increasing concern about the environment and the manner in which we use natural resources in order to deal with the poverty link. Food security, poverty, and environmental degradation are inextricably intertwined. We must recognize that we have a billion people who live on only $1 a day, and certainly a billion people who have no access to clean water, and 1.7 billion who are living in extreme poverty in cities or in quasi-urban areas who need food at better prices, but who also have no access to any kind of help because they have no incomes. These two factors together, result in avoidable infant deaths that number between two and three million a
year. We must recognize that we have a contribution to make. Just because it is not a famine that is under the television cameras of CNN, it is no less pernicious when poverty takes at the margin hundreds of thousands of lives every year that we do not see but that are very real. I would hope that the spirit of those hundreds of thousands would permeate these discussions in the next few days.

The poor, whether they live in cities or in rural areas, are suffering under miserable conditions. They are unable even to maintain the fertility of their soils, and so much has to be done and that is just the start of problems against which we know we are adding 90 million to 100 million people a year. Whatever is going to come out of Cairo, whatever is going to be done on population, we will have at least a billion more people on the planet over the next decade. We already have close to a billion who are malnourished. What are we going to do about them?

The challenge for which the CGIAR contribution is absolutely essential is to produce differently, not less. We have to produce more, but we have to produce differently, both to protect the environment and to reach the poor. We know that food output will have to double. We know that the cities are going to at least treble in size in the developing world and that the poor among them will be severely affected by the availability of food. We want to make sure that the production of food does not lead to environmental degradation that undermines everything else. This is closely linked to the problems of poverty, for whenever we have environmental problems, it is the poor who suffer and who suffer the most, and among the poor and among the socioeconomic groups, women suffer inordinately. They are also the ecosystem managers at the micro-scale, the ones who are responsible for the fuelwood. It is in the involvement of the role of women, the empowerment of the poor farmers that we talk about, that we have to give meaning and substance to the ultimate beneficiaries of the work that we are here to fund.

Whether they be a smallholder farmer or the poor and destitute in the urban areas or women and children, empowering them essentially will require that not just the CGIAR, but other donor institutions that are represented around the CGIAR, enhance the modes of participation to bring in village groups, herders’ associations, fishermen’s groups, and community-based organizations at all levels that are not only fountains of wisdom but are ultimately the ones to implement the findings that we will bring together. All of this will require a change in the institutional culture that permeates the CGIAR, and it is, indeed, a paradigm shift that we are talking about. Now paradigm shifts are notoriously difficult to bring about. Almost all of you here are scientists, and I think you will agree with me that all progress has been accompanied by paradigm shifts. I invite you, therefore, to look at this process of renewal in which we are engaged as an opportunity to change the paradigm. We need to do it, not just for the CGIAR, but we need to do it for the poor and the marginalized of the world. We need to do it for the women who are bearing the cost of the inequity of the current status quo. We need to do it for the generations to come for whom we are custodians of this planet, and we need to do it for Mother Earth herself.

Thank you very much.
CHAIRMAN’S CLOSING STATEMENT

Ladies and gentlemen, the last item on the agenda is the summation. We are now coming to the close of International Centers Week 1994 (ICW94). It is without question an important event in the program of renewal and re-education that was launched by the CGIAR in New Delhi. We took a number of important decisions and implemented proposals for change which moved the process forward. It is fair to say that the mood during ICW94 maintained what some of us have come to call the Spirit of New Delhi.

Two changes in format are noted because I believe they garnered enough support to become new ways of doing business. First, we started with a topic that was not strictly business. That is, we had a Science Forum, comprising a number of presentations, made by Mr. Swaminathan, Mr. Conway, Mr. Barreto de Castro, myself, and many other participants. It enabled us to go beyond the immediate and take advantage of the breadth and variety of the participation at ICW94 to recapture some of the substance that International Centers Week (ICW) should also include. I hope we will also devote some time to issues of substance at the next ICW as opposed to issues of process and administration. Second, we engaged our business in smaller committees and plenaries.

Some of the points raised in the Science Forum are relevant to what we have done at ICW94 and the process of renewal of the CGIAR. We started by introducing a sense of perspective that one cannot talk about the role of scientific research through institutions like the CGIAR and international centers without equally recognizing that, in order to translate that into action on the ground in developing countries, we need the national agricultural research systems (NARS), the extension services, and the educational systems that underpin the availability of quality science in the developing world. This quality science is not produced from scratch, but requires an interaction between a community of scientists—South-South collaboration as well as North-South collaboration. There is a fundamental value in promoting this because there is at present a huge gap, quantitative and qualitative, between the availability of science and the technological expertise in the North and in the South, on the order of 3,800 per million in the North versus 200 or less in the South. That gap is huge, and will not necessarily be bridged. However, it does mean that one must use the resources available in the South as effectively as possible.

We cannot allow this to continue. Therefore, part of our effort to build links with NARS must be the strengthening of science, which also involves improving environmental and ecological analysis. I repeat again my strong personal commitment to the values associated with the exercise of science. This is something that is essential to the modernization processes of developing countries. There is a value in modernization that passes through the modernization of values in societies themselves.

We talked about the vision of which Mr. Conway spoke. I raised the example of the Jeffersonian vision, which, though unattainable and not likely to come about in the United States, is nevertheless a very relevant vision for what it tells us about the directions we should move in and the values to which we must adhere. Values are not rules. They are those approaches that enable us to
see in sharp focus, complex issues such as honor, justice, dignity, and respect for our colleagues in other places. That is all part of what this exercise is all about. We talk about building partnerships and strengthening links. There are values inherent in that. The vision of the kinds of links we would like to achieve is one that should continue to inspire. The ideal of the microbiologist working alongside of the farmer in the field may be as unattainable as the Jeffersonian image of a nation of small farmers; nevertheless, both of them are inspiring visions that keep us going, searching, and improving.

We moved from the Science Forum to our business sessions with a progress report, in which I challenged the Group to go beyond being an inbred group, to search for outreach and openness, and to promote a change in the culture of the institution. The world is changing around us. If we do not want to become a dinosaur, valuable or friendly or appreciated as that species may be, we still need to adopt a culture of change ourselves. I feel this shared vision and this new culture has been formed around this table through these discussions.

What were these discussions about? We set for ourselves three specific objectives: to close the books on 1994; to establish a budget for 1995; and to establish a framework for the next step, which is the Ministerial-Level Meeting. I think we have done quite well on all three points. On 1994, we are right on target on what we set out to do, and we will be able to close the books there. From the pledging sessions for 1995, we are close enough to be able to consider that the center-specific budget will be met, and we looked at systemwide initiatives. The framework for the Ministerial-Level Meeting in many ways provided the framework for our own discussions.

I had suggested that we would have five documents for the Ministerial-Level Meeting. First, an Overview document, which would be a short, stand-alone document about ten pages in length that would cover the entire statement and vision we want to bring to the Ministerial-Level Meeting. The Overview would be backed up by four documents: one dealing with vision, the result of the Gordon Conway Panel, which was discussed in New Delhi and which has been finalized and is now a completed document; and the others dealing, respectively, with the research agenda, governance, and finance. We decided to add one more document on the global context—the core of that argument was eloquently presented by Mr. McCalla in the Sir John Crawford Memorial Lecture.

Therefore, we started, with the exception of the vision piece, with work in progress. We have made much progress in carrying it forward in these deliberations. It is clear that to engage, as we hope to engage, the participants at the Ministerial-Level Meeting, the documents must be seen as work in progress (although much better presented than what you received). We are not asking them to rubber stamp a predigested decision, but are asking them to contribute and thereby to take ownership of and commitment to whatever the objectives and values they will be setting into the documents.

We looked at the research agenda, and acknowledged the draft paper as an excellent representation of where we are today. It was discussed both in plenary and by an Ad Hoc Committee, chaired by Mr. El-Zabri of the Arab Fund, and it was reported on again in plenary. Valuable guidance came for its future development. There was wide acceptance that we need to do a better job in presenting the link between this agenda, the 3 to 4 percent—and I accept that we have to choose a figure, whether it is 3 or 4 percent, and be consistent throughout our documentation—and the remaining 96 or 97 percent out there, and show how the CGIAR is a serious actor as part of the overall effort, which itself has to be directed to meet the global challenges to which we are committed.
We acknowledged also that additional points on the research agenda require looking at, involving where we go above and beyond the current research agenda and the links with the other 96 percent. Three major points were made in this regard. One is that many of the initiatives that are called systemwide initiatives should not be seen as marginal activities, but as central parts of the overall agenda. That is both a matter of presentation as well as a reflection of reality. The report that Mr. Stein Bie presented in New Delhi on follow-up to Agenda 21 and the seven plus one projects, which became the eight areas that we have to incorporate, must find their way into the language and presentation of the research agenda.

The research agenda as it now stands is a fair assessment of where we are and where we have come. We have discussed at length how we are going to change some tables and numbers in the presentation. The essential part is that this is a vision of where we are today. We need to relate that to the other 96 or 97 percent. We need to recognize the directions in which the change is going, and we need to show that the processes by which we are going to get there are present and underway. In this regard, I suggested and have taken as accepted that we will set up two additional ad hoc panels or committees or task forces: one dealing with the issue of sustainability in agriculture, conceptually and how to organize such a concept that is linked to the research agenda and which has operational value; the other dealing with ecoregionality.

There has been a third group that is being set up for genetic resources that may have some direct feedback on how we further improve the presentation of the research agenda. The reasons for setting up this group were not so much the improvement of a particular document, but to provide guidance for the activities of the System on genetic resources over the next several years.

The next item was the issue of governance. The report of the CGIAR Study Panel on Governance and Finance was presented to the group by Mr. Bennett of the United Kingdom in the unavoidable absence of the Panel Chair, Mr. Winkel of Denmark. All of us were taken by the speed with which the panel reached its excellent conclusions. I would again like to commend Mr. Bennett for his masterful presentation of what could have been a contentious and difficult topic, a combination of lucidity and humor seldom matched.

Broadly speaking, the themes outlined in the report were accepted and supported by the Group. The Group was willing to experiment with establishing and conducting periodic NARS consultations, whether they are called a global forum or regional fora or otherwise, although a number of us expressed concern about the proposed frequencies. The issue should be revisited after we have had our first experience with exercise sponsored by the International Fund for Agricultural Development (IFAD) in mid-December. That will be an opportunity to assess both the importance and usefulness of this kind of exercise and to get some feeling as to its cost, strategically, financially, and in terms of time, as well as the frequency with which it should be held. I have asked members of the Technical Advisory Committee (TAC) to attend and actively participate in this forum so that they can both enhance the debates by their presence as well as have an opportunity to hear first-hand the concerns of NARS leaders, our partners in this joint enterprise.

The proposal to strengthen the CGIAR itself by broadening its membership to include more developing country members was unanimously and very strongly endorsed. It is my belief that pursuing this single, most important dimension will truly transform the CGIAR into an international forum—a forum that is away from the donor-recipient mentality, the "ask them" mentality. We have
ANNEX III

heard eloquent interventions from a number of our colleagues from developing countries. I noted in particular the interventions of our colleagues from Colombia who were among us for the first time. It was also accepted that, in this effort, we should not reduce the current contribution required to be a member of the CGIAR. There was a suggestion made that small island states or poor countries might be permitted to pool their resources for combined membership. We said that we would consider this on an ad hoc basis as it arises.

In terms of the CGIAR decisionmaking structure, the structure described in Option 2 of the governance paper was accepted with some clarifications—primarily that delegations would control the size of their representation at meetings and this would not be predetermined by some central authority. There was an acceptance of using the Mid-Term Meeting (MTM) as the key agenda setting exercise, with ICW being used to launch new ideas where we might benefit from having so many others who participate in ICWs for an exchange of ideas on substance, administration, and content. This would bring more content back to ICW, where this wide tendency is expected and where the breadth of expertise needs to be harnessed.

The existing arrangements for the Oversight Committee, Finance Committee, and the Steering Committee—which consists of the combined membership of the Oversight and Finance Committees meeting in joint session under my chairmanship—remain unchanged. While no new standing committees will be set up, ad hoc committees may be convened to review specific issues, and such committees would form a consultative mechanism. We set up one such committee here, that dealing with genetic resources.

We endorsed the need to set up an Impact Evaluation Unit, whose efforts should be distinct from those managed by the Public Awareness and Resource Mobilization Committee (PARC), although PARC may use the outputs of the Impact Evaluation Unit for its activities. PARC is preparing a first effort at the methodology that could be used, and we have a task force that has been set up for this activity.

On financial arrangements, we discussed a number of items, and the matrix was prominent. I would like to repeat what I said at the beginning: the matrix is only a tool; it is not an end in itself; let us not give it any more attention than it deserves. It is a tool that helps to clarify the role of the CGIAR System, both within the global system and within its own activities. There was concern that the content of the matrix needs to be clarified with systematic definitions so that the collapsibility of columns from disaggregation into aggregation can be pursued more effectively. The TAC task force to develop suitable definitions for the columns and to provide content to the matrix concept was welcomed.

We also accepted that we should take a practical approach to implementing the overhead and constraint research columns; that at present we are not in a position of having absolutely fixed coefficients in any of these, and we should start on a learning by doing process. There was also a clear explanation that these columns do not necessarily mean that every single program is an integrated, inter-center activity. There may be general programs that are pursued independently by centers, with only some of them having inter-center working programs. The columns certainly do not imply new managerial structures.
ANNEX III

In dealing with systemwide programs, there was a need to recognize the partnership building, bottom-up aspect of building common agendas. There we decided to accept an *ex post* outcome evaluation by TAC of what is inherently a process activity. In addition to adopting TAC's $5 million recommendation for systemwide programs, we added another 1 percent to enable us to finance these process activities.

On the budget as a whole and the modalities of financing the activities of the system, we recognized all four types of modalities: system-wide finance; center-specific finance; program-specific finance; and project support. All are legitimate as long as they fit into the overall activity. There was recognition that, while some activities may deservedly be brought into the agreed work program and agenda that is inside the matrix, they will not be introduced in 1995, but in 1996. The agenda and budget for 1995 stand on that basis. We recognize that outside of that budget there are complementary finances for ongoing activities, and this will be part of our further discussions of these issues at the MTM when we set the agenda for 1996.

We also discussed that there should be no disincentives for donors to provide unrestricted funding. Far from it, we said the incentive structure should be designed in such a way that it encourages as many donors as possible to give unrestricted funding that would enable the centers to execute their programs with a minimum of difficulty. We also recognized that donor incentives need to exercise discipline and ensure funding of the agreed research agenda. There were even suggestions for a code of ethics and behavior that is acceptable to both donors and centers. Let us at present just say that we all need to exercise discipline.

I took the occasion to salute two centers—CIP and WARDA—which each made a special effort this year and over-compensated their retargeting in order to release funds from the matching facility of the World Bank that went to other centers in the System. This is exactly the kind of collaborative behavior that we would like to encourage.

There was recognition that we will not arrive at a final budget matrix in one shot, but that negotiations will be required between individual donors and the Secretariat to reach closure on the financing plan and that such negotiations are at the discretion of the Finance Committee and the Secretariat with individual donors. We will provide a matrix for the system as a whole, and each center will have its own matrix, but we will not put out a donor-by-donor matrix. We will maintain that as a working document and publish only donor contributions against the total. This was accepted and is a working arrangement.

A few broader questions of strategy were raised that needed to be addressed. We recognized the desirability of multi-year financing, but also recognized that it would not be possible to reach multi-year financing for many donors. This was one of the topics that was suggested for inclusion on the agenda for the Ministerial-Level Meeting.

We recognized that donor financing from public institutions will probably remain the primary source of funding for the international public goods research in which the CGIAR specializes. While not soliciting active financial support from the commercial private sector, this should be seen as distinct from active scientific collaboration with the private sector. Increased participation and ownership by developing countries as equal partners away from the old donor-recipient mentality was reasserted in the context of deciding on all types of financing.
We rejected the commercialization of research output as a source of revenue, and we agreed to continue to explore proposals and possibilities for establishing a foundation to help provide some stable sources of funding that may be specific to individual centers or may be specific to the System as a whole, although expectations would not be for a very large percentage of the total. We accepted the Ford Foundation’s offer to fund examination of this concept.

I am still determined that our colleagues in the centers will have a budget with which to work for 1995. The budget is very close to being obtained. We are within one or two percentage points of closing it. On the center-specific system, it is less than 2 percent—it is a 1.4 percent difference—and this is very close to having a workable budget. I intend to pursue this with the Secretariat, the Finance Committee, and the individual donors to arrive at a conclusion as well as to come as close as possible to the 50 percent financing in-hand at the beginning of the year. We discussed, as explained by Mr. Petit, that the Finance Committee would recommend that the World Bank allocation be distributed in two tranches: the first at the beginning of the year, proportional to the work programs and budgets, and the second later on as a gap-filling exercise. I would like to see that treated not as gap-filling in the traditional sense, but as cofinancing of particular activities. That is something on which the Finance Committee will have to do more work.

We also added a new paper for presentation to the Ministerial-Level Meeting, the global context paper, the core of which we agreed would be the Sir John Crawford Memorial Lecture. This needs to be added to the package that will go out. Beyond that, we looked at the business of systemwide programs. Perhaps the most important of these was the genetic resources program. We dealt with four interrelated subjects. First and foremost was the signing of agreements between the CGIAR and the Food and Agriculture Organization of the United Nations (FAO) on plant genetic resources—without question a milestone in the relationship of the CGIAR with the international community and a new facet of cooperation between the CGIAR and its cosponsor, FAO. It also gives content, meaning, and legal legitimacy to the concept of trusteeship. By having an inter-governmental body, such as FAO’s Commission on Plant Genetic Resources, associated with the oversight of the CGIAR’s plant genetic resources collections, we have taken a big step forward, and we recognize that we were the first to do so in the whole international community. It is to the credit of the CGIAR that it was the first to take the step, and it is my hope that others will follow.

Second was the report of the CGIAR Panel on Intellectual Property Protection, referred to as the Swaminathan Panel. Mr. Swaminathan introduced the report, which proposed that the CGIAR take an active and leading role, rather than a reactive one, at a time when far reaching developments in the broad area of intellectual property protection are taking place. He urged, in particular, that priority attention be given to four topics: patterns and plant variety protection in developing countries; germplasm collection; both ex situ and in situ conservation; and public information. The report was broadly accepted by the Group. There were no disagreements with any of its recommendations.

There was a strong feeling that at least one aspect of implementing the report’s recommendation to be proactive would require assertion that the System speak with one voice, to be an active participant in shaping the new world order on germplasm and genetic resources. Therefore, an arrangement that would enable us to do so was needed. While the CGIAR Chairman could indeed function as the System’s ambassador in an overall sense, technical expertise was absolutely needed, and it would be provided largely by the Director General of IPGRI, as the lead center on genetic resources, and the Inter-Center Working Group on Genetic Resources.
ANNEX III

There was also strong feeling that we need guidance and support in an ongoing fashion beyond that, rather than just a report presented now by the excellent work done by the Swaminathan Panel. We, therefore, agreed to set up an Ad Hoc Committee on Genetic Resources. This Committee specifically will: one, examine policy, legal and ethical issues regarding genetic resources and recommend CGIAR action, as and when necessary; two, monitor the processes of the Convention on Biodiversity and the FAO Commission on Plant Genetic Resources as they relate to the CGIAR and recommend CGIAR policies or mechanisms as necessary; and three, monitor the implementation of the CGIAR agreements with FAO regarding the placement of ex situ plant genetic resources collections of the centers under the auspices of FAO, and recommend CGIAR action, if necessary. This committee will report to the CGIAR at its semi-annual meetings and to the CGIAR Chairman between meetings.

The committee was to be appointed by the CGIAR upon the recommendation of the Chairman following consultations. We have all unanimously endorsed the Chair, Mr. Swaminathan, in plenary. I now have a membership list which I would like to read out. The names are well known to all of you—Mr. Hawtin, Mr. Bertram, Mr. Bengtsson, Ms. Zimmermann, Mr. Benz, Mr. Rothschild, and Mr. El-Beltagy, our new Director General of ICARDA as of January, current NARS leader from Egypt, and a member of the Swaminathan Panel on Intellectual Property Protection. The Committee will be directly linked into the Inter-Center Working Group on Genetic Resources through Mr. Hawtin. We have two centers represented—ICARDA and IRRI—which are large holders of germplasm, and we have members from TAC and from donors represented. It is, therefore, a balanced group, which will have the authority to draw on additional expertise as and when it sees fit.

We also heard a report from Mr. Hawtin on progress toward a systemwide genetic resources program. This follows the decision in New Delhi that we would adopt such an approach. The status report was very well received.

Another aspect that concerned the System as a whole, to the extent that it involves two centers becoming one, was livestock research. Mr. Herdt, on behalf of the Rockefeller Foundation which was the implementing agency, and Mr. Clarke, Chairman of the Board of Trustees of the International Livestock Research Institute (ILRI), presented the report. I am happy to salute again the international agreement establishing ILRI, which was signed in Bern, Switzerland on September 21, 1994. We hope ILRI will be fully operational by January 1, 1995 as anticipated. The new Board has already begun its work: it has appointed a Director General, Mr. Fitzhugh, and is now working on a strategic plan for 1994 to 1998 and the details of the 1995 program and budget.

We set aside in New Delhi $10 million to deal with systemwide research or activities. We looked at alternatives to slash and burn as presented by Mr. Sanchez; the rice–wheat based cropping system as presented by Mr. Ryan; the lowland tropics as presented by Mr. Haven; and the Zschortau Plan for soil, water and nutrient management as presented by Mr. de Haas. I raised some conceptual timing and administrative issues, such as how we strike a balance between the way these programs do research, assessed on outcomes of new technologies replicable and adoptable in farmers’ fields, and the process side of widening partnerships with effectiveness, assessed in terms of enhanced collaboration. Both are there, and ultimately they will be mutually reinforcing, but at various points in the life cycle of an activity they take different precedents. Therefore, we adopted a willingness to fund the process part upfront, or the bottom–up building of the agenda, without an ex ante evaluation, accepting an ex post evaluation of outcome.
We looked at administrative and finance aspects of where the leadership would lie as well as several models—a convening center model; a strong leadership model; a model that involves others from the outside, and others. We adopted a learn-by-doing approach, recognizing that it represents a very small proportion of our overall budget and that we should be pragmatic and flexible at the start and not necessarily try to prefix a methodology. We did recognize the importance of these activities and that they present opportunities for new openness and building new partnerships, and that this has to be a central part of their objectives as well as the effectiveness of what they will ultimately do. We also balanced that with the need to ensure rigorous science and analysis despite the transaction costs and the extra-organizational effort that is involved. We will look again at that balance at the MTM, when the new agenda will be presented for the first time.

The final part of the agenda involved the activity reports by the TAC Chair, the Oversight Committee, the Finance Committee, and the Ad Hoc Evaluation Committee, chaired by Mr. van den Berg, that reviewed the IIMI External Program and Management Review and external review processes in the CGIAR. A summary of the discussions was circulated and largely adopted. There was also the report of the Ad Hoc Committee on the Research Agenda that was presented by Mr. El-Zabri, which helped us to finalize our attitude toward that matter. We heard from PARC Chair, Mr. Pinstrup-Andersen, who outlined the activities being undertaken by PARC. We also had the pleasure of hearing Mr. Tribe on the launching of the book *Feeding and Greening the World*, and the presentation of the Downes Ryan report by one of its principals. We heard the report of the Committee of Board Chairs, presented by Mr. Dillon, and the Committee of Center Directors, presented by Mr. Bonte Friedheim. They reported not only on their activities and plane for the future, but also their concerns. Both were fully supportive of the efforts to renew and change the CGIAR.

We made a number of tributes, including tributes to IITA for receiving the King Baudouin Award, departing TAC members, the departing TAC Chair, and those of our members who are leaving us or who have already left us. We also welcomed those who were new. I would like to repeat again that we said farewell to a number of Board Chairs and a number of Center Directors. I discovered to my surprise that even some people I had not mentioned the first time were actually leaving us, including Mr. Helleiner and Ms. Senecal, who are leaving center boards. Let me get the full count again. On my behalf and on behalf of the Group, we thank the Board Chairs that are leaving their current responsibilities—Mr. Innes, Mr. Helleiner, Mr. Roberts, Mr. Falcon, Mr. Nielson, Mr. Bommer, Ms. Senecal, and Mr. Swaminathan—as well as the departing Center Directors—Mr. Winkelman, Mr. Fadda, Mr. Lenton, Mr. Fitzhugh, Mr. Gray, and Mr. Lampe—although, of course, Mr. Fitzhugh turns right around and comes back again. So, it is also a combination of welcome.

We decided that the MTM in 1995 will be held on May 22–26, 1995.

I would like to thank all those who participated in the successful outcome of this meeting. I would like to say again that what we are all about right now is the forging of a new vision and a new culture. Those of you who are worried about the Ministerial–Level Meeting and beyond, think that a few months ago many were worried about this meeting as well.
My friends, it is within our grasp to forge the future because the future right now, this instant, is being forged in the crucible of our minds. It is our attitude and our approach that we take that will change the culture and not only enable us to look toward reaching the unreachable and including the excluded, but also to make possible what sometimes appears impossible.

Thank you all.
SCIENCE FORUM

*Science Capacities in the Developing World -- The Realities*
*Opening Address by Ismail Serageldin, CGIAR Chairman*

Mr. Serageldin launched the Science Forum with an invitation to members and guests to join in reasserting the importance of science as an instrument of development. Overcoming the pressures of population growth, stressed environments and deep poverty in developing countries is a global task, he acknowledged. However, developing countries need to be strengthened in their ability to address these problems. Environmental analysis and agricultural research, based on high quality science, are essential tools.

The ICW94 Science Forum, he pointed out, continued the dialogue begun at a joint World Bank-National Academy of Sciences (NAS) Science Forum, held in Washington in September, as a complementary event to the Second Annual World Bank Conference on Environmentally Sustainable Development. The results of the World Bank-NAS Forum were presented at the First Meeting of the Commission on Science and Technology for Sustainable Development in the South, in Pakistan, at which Prime Minister Benazir Bhutto delivered the keynote address.

The need to strengthen and promote science as a fundamental component of the development process is based on three interrelated strands, Mr. Serageldin suggested. The first is the need to provide anchors of excellence in developing countries so that they can be full participants in the transformation of the world economy, rather than being passive recipients of rich country technology. Four-fifths of humanity cannot be denied participation in the ongoing and empowering march of human knowledge, he argued.

The second theme is the transformation of agriculture. This will require agricultural research establishments that will draw on the basic sciences as never before. National research and extension systems will need to be coupled with effective universities and research centers. Mr. Serageldin’s third point related to environmental analysis. This must transcend political sloganeering, he maintained, and move toward substantive analysis of problems and solutions, with local scientists exercising their comparative on-site advantage to investigate local biological and physical realities.

Mr. Serageldin drew attention to the vast and growing “knowledge gap” between the North and South. Statistics compiled in 1990 show 3,800 scientists and engineers per million people in the North versus less than 200 in the South. Linked to the quantitative gap is a qualitative gap. Many institutions lack adequate infrastructure for existing scientists to function. “We are still struggling with the needs of basic laboratory equipment at a time when the North is mainstreaming computers for the average person to use as simply as telephones,” Mr. Serageldin said, dramatizing the contrast.
Noting some important steps that were being taken and could yet be taken, Mr. Serageldin mentioned a new unit created in the World Bank to promote agricultural research in developing countries by improving links among international centers, universities and national agricultural research and extension systems. The World Bank was complementing this effort with up to $2.5 billion over five years to support national research and extension systems. Such support, Mr. Serageldin insisted, must be coupled with an effort to strengthen the basic research culture in universities and their commitment to excellence. He suggested that it would be most effective to target investments at institutions and areas of expertise where the international agenda and national agricultural research agendas are connected. Thus, a review of where that occurs is necessary.

Referring to the revolution in computing and communications, Mr. Serageldin saw this as a tremendous opportunity to narrow the knowledge gap. However, there is a need for organizations such as the Third World Academy of Sciences to serve as gateways to help developing countries cope with the flood of information, "to screen out the noise, focus the reception, expand the horizons."

Finally, Mr. Serageldin reflected on an even more profound reason for strengthening science and the scientific outlook in developing countries. Modernization, he maintained, is premised on a fundamental social transformation. Now, modernization does not necessarily mean "Westernization," he insisted. Rather a truly modern society possesses certain universal, humanistic values -- rationality, creativity, the search for truth, adherence to codes of behavior and a certain constructive subversiveness -- namely, the very values promoted by science. This presents, then, a powerful reason to regard science as an essential element of development.

Science and Development: Personal Thoughts
Special Address by M.S. Swaminathan

Mr. Swaminathan began his address with a tribute to Professor Abdus Salam, who has done more than any other living scientist, he said, to emphasize the importance of attention to science and technology in the Third World. With the collapse of skin color-based apartheid, he went on, the most important and difficult apartheid to overcome is the science and technology apartheid. For this reason, he welcomed Mr. Serageldin's leadership in promoting science and technology in the Third World. Nonetheless, he cautioned the Group to be realistic in its expectations. Quoting from a report of a population summit held by the world's leading scientific academies a year ago, he read:

"Humanity is approaching a crisis point with respect to the interlocking issues of population, environment and development. Scientists today have the opportunity and responsibility to mount a concerted effort to confront our human predicament, but science and technology can only provide tools and blueprints for action and social change. It is the governments and international decision-makers that alone can solve problems created by rapid population growth, wasteful resource consumption and poverty."

Reflecting on the enormous task of science, Mr. Swaminathan pointed out that when agriculture was introduced 10,000 years ago, the earth's population was less than 6 million and took 8,000 years to double. Today, it totals 5.5 billion and is expected to double in 40 years. Can we double food production every 40 years, Mr. Swaminathan wondered aloud. In the past, technologies produced by the international centers had successfully averted the famine and starvation predicted in the 1960s. Rice yields in the All India Rice Trials, he said, jumped from one ton per hectare to seven
and eight tons per hectare. Now there is even the promise of 12 tons. However, such production gains have had an environmental cost. Today, continued degradation of the environment is no longer acceptable. Thus, scientists are being asked to come up with innovations that make it possible to grow more food with less land, less water and less energy. This is an enormous challenge.

Moreover, analysis of the world’s population shows 80 percent of the world’s annual income going to only 20 percent of the people. Another 20 percent receive only 1.4 percent; over one billion people live on an income of less than one dollar per day. Thus, the new generation of agricultural technologies must also address poverty alleviation and job growth.

Other factors influencing the parameters in which scientists design their research strategies include deterioration in biodiversity and biological productivity, particularly land and water, and interference with climate and radiation. Decomposition and waste recycling of non-biodegradable or toxic waste present yet another problem.

A stripe review of recent high-level summit meetings, such as the Earth Summit in Rio, shows that sustainable development, human rights, poverty and women’s issues rank as global political priorities. This suggests a receptive environment for greater attention to science and technology, particularly with regard to agricultural research and the environment. Also relevant to the mandate of the CGIAR are conventions or agreements concluded on biodiversity, climate, desertification, the seas and world trade.

Identifying some areas for change and hope, Mr. Swaminathan stressed the need for improved partnership at all levels -- among international centers, NARS, advanced institutions, universities in developed and developing countries, the private sector and poor of the world. In particular, collaborative, participatory research with rural families and farming communities is a must to address the problems of equality and equity.

Exciting opportunities are to be found in four new important groups of technologies: biotechnology; information technology; management technology; and technology of space and information transmission, such as telecommunication. The key, Mr. Swaminathan concluded, lies in blending the best in traditional wisdom with frontier technologies of modern science to develop a new brand of “ecotechnology.” He called on the CGIAR to be a leader in developing new “ecotechnologies.”

**Science in Developing Country Agriculture Research: Biotechnology - Opportunities for Brazil**

*Luis Antonio Barreto de Castro, Special Representative of the Minister of Science and Technology, Brazil*

Mr. Barreto de Castro provided a brief overview of the role of biotechnology in agricultural research in Brazil. By way of background, he pointed out that agriculture is extremely important in Brazil, representing 30 percent of the country’s gross national product (GNP). Broad trends influencing agricultural production include environmental issues, consumer acceptance and a growing emphasis on crops or livestock with which Brazil can compete on the world market. Results of a recent study of Brazil’s competitiveness in agricultural areas show that it has a comparative advantage in producing soybeans, orange juice and poultry. Thus, biotechnology is regarded as a key tool in making Brazil’s
products more competitive, by enhancing quality and cutting production costs through less reliance on agri-chemicals and expensive energy sources.

To date, however, the revolution in genetic engineering has been led by the private sector, in terms of both investment and products. Some 86 percent of plants released for tests in the United States come from the private sector. Because they need a return on their investment, private companies have focused on easier problems that offered the greatest likelihood of rapid results and returns. For instance, said Mr. Barreto, there are plants with resistance to insects and herbicides, but we have not worked on resistance to biotic and abiotic stress conditions such as drought and aluminum toxicity. These are more complex problems related to basic physiological processes, and take longer to investigate. More biodiversity is another objective. Mr. Barreto noted that not more than 30-40 genes are presently being used.

North-South cooperation is essential to deal with these long-term, complex scientific issues, he emphasized, as is greater investment. Currently, cooperation with the First World is hampered by the need for patent and biosafety laws. Mr. Barreto was optimistic, however, that the Brazilian Government would pass a set of laws in early 1995. Another major limitation is financial. Brazil continues to experience inflation, and inflation absolutely impedes long-term efforts, he said. Public investment in science and technology also competes with urgently needed investments in education and health. Brazil has serious social problems requiring immediate attention. In this connection, Mr. Barreto pointed out that Brazil has invested only a fraction of one percent of its GNP in science and technology, with 92 percent coming from public sources and 8 percent coming from private sources. The private sector has to get more involved, he argued. He described a new law to stimulate private sector investment, which allows companies to deduct one dollar from fiscal debts for every dollar invested in science and technology. It is hoped that this incentive will add $800 million a year from the private sector.

Thus, with increased investment and international cooperation, and the ability to acquire and transfer technology, Brazil will be able to pursue and achieve the goals that genetic engineering can realize in the future.

Taking Stock: Where We Stand
Panel Discussion

Chair: Donald Winkelman, CIMMYT
Discussants: Mohammed H. A. Hassan, Third World Academy of Sciences
            Cyril Ponnamperuma, The Third World Foundation
            Michel Petit, The World Bank
            Andrew Steer, The World Bank, Environmental Department

Chairman’s Remarks

The objective of the panel presentations, Mr. Winkelman said, was to take stock of the circumstances of science in the developing world and to exchange information about opportunities for further development and greater interaction.
Mohammed H.A. Hassan

Mr. Hassan, executive director of the Third World Academy of Sciences, highlighted the objective of the Academy and some of its activities. The Third World Academy of Sciences was founded in 1983 by 41 distinguished developing country scientists. Membership has grown to 350 scientists from 55 countries, including nine Nobel Laureates of Third World origin. The Academy is headquartered in Trieste, Italy, and receives 75 percent of its funding from the Italian Government. Other contributions come from SADDC, the OPEC Fund, UNESCO and governments in the South. Contributions from the latter are increasing.

The Academy’s main objective is to promote scientific excellence in the Third World through awards, fellowships and grants to support scientific projects. It is also playing a catalytic role in engaging political and financial commitment to building Third World scientific capacity and in recommending appropriate actions.

Mr. Hassan described one initiative in particular involving the development of a network of centers of excellence in science and technology in developing countries, modeled loosely along the lines of the CGIAR centers. Mr. Swaminathan also referred to this network in his presentation. Such a network will facilitate more effective South-South and North-South cooperation, without which the science and technology gap will continue to grow, Mr. Hassan argued. Following one and a half years of arduous work, a book entitled “Profile of Institutions for Scientific Exchange and Training in the South,” has been published by the South Center in Geneva, Switzerland. Some 300 institutions are profiled. Only a handful of highly competent research institutions were identified as candidates for the network.

To engage political and financial support, the Academy organized a high-level meeting of Third World ministers of science and technology and representatives of heads of state. At the meeting in Islamabad, establishment of a network received formal political endorsement, and ten centers were selected to serve as the first nodes. Moreover, to sensitize the Third World to the importance of science and technology and to promote indigenous capacity, it was agreed to create a permanent commission of heads of state. The commission, which is expected to meet once every three years or so, will be headquartered in Islamabad at the invitation of the government of Pakistan. The Prime Minister of Pakistan will serve as chair of the commission for the next three years. A formal agreement was signed by 14 countries as founding members of the commission.

Cyril Ponnamperuma

Mr. Ponnamperuma, president of the U.S.-based Third World Foundation, which works in close collaboration with the Third World Academy of Sciences, took up the thread where Mr. Hassan left off. Casting the problem of the scientific gap in a somewhat different light, he noted that by the year 2020 80 percent of the population will live in the Third World. Currently, 94 percent of the world’s scientists serve 25 percent of the population. A mere 6 percent serve the remaining 75 percent. Yet this is not a new problem, he reminded his audience. Already twenty years ago, in 1972, Indira Ghandi observed:

“How can we urge the preservation of animals, how can we speak to those who live in villages and in slums about keeping the oceans and rivers and the air clean, when their own lives are contaminated at the source? The environment cannot be improved in conditions of poverty, not can

ANNEX IV
poverty be eradicated without the use of science and technology." Mr. Ponnampерuma applauded the
new responsiveness of the World Bank, and its decision to provide financing to strengthen national
research and training institutes. International donor support coupled with Third World commitment to
developing indigenous scientific capacity, as demonstrated by the decisions taken at the high-level
meeting in Pakistan, provide the necessary impetus for moving forward. Referring to the same
database of institutions Mr. Hassan mentioned, he said that 14 had met exacting criteria and were put
forward in Islamabad as warranting support.

These institutions also provide an appropriate and ready clientele for partnerships with First
World institutions. Mr. Ponnampерuma described a Third World Foundation initiative involving the
establishment of a North-South Center on the University of Maryland campus. Many U.S. Government
research agencies such as the U.S. Department of Agriculture and National Institute of Health, and
other advanced research institutions are based within a 25-mile radius of the university. Most have
active international programs. The objective of the North-South Center would be to broker partnerships
between research centers of the South and these programs. This approach would serve both to
strengthen developing country capacity and provide a vector for developing and applying advanced
technologies in the Third World. The idea of a North-South Center has received enthusiastic approval
from Maryland’s two senators. A fundamental guiding principle of the Center would be, first and last,
to improve the quality of life in the Third World.

Michel Petit

Michel Petit, who is directing a new World Bank unit commissioned to help in strengthening
agricultural research in developing countries, drew attention to four important changes that have
occurred since the International centers were created some 30 years ago. First, although the number
of trained scientists in developing countries is still too low, it has increased significantly. Second, there
has also been and continues to be a real scientific revolution in biology. Third, the research agenda
has broadened enormously. Finally, institutions in the North doing tropical agricultural research, such
as U.S. universities, have undergone profound changes, raising serious concern about the financial
sustainability of that effort. These changes contribute to defining a new agenda. This means, Mr. Petit
argued, each partner has to identify new roles. Interdependencies among partners have to increase.

Yet there are serious obstacles in the way. NARS are hamstrung by constraints. Funds are
lacking. Moreover, resources tend to be concentrated in government-sector institutions, in which
bureaucratic constraints are severe. Scientists have little or no mobility or outlook for promotion.
Fragmentation exists among partners in each country -- universities, farmers and their organizations
-- and at the donor level, due to a multiplicity of donor-funded projects. In Tanzania, Mr. Petit’s
colleagues counted more than 140 different donor-supported projects, each with its own system of
accountability and sub-objectives, and expert teams calling on local officials. Finally, there is
insufficient integration between the NARS and international centers’ programs.

Referring to tools the World Bank has available to address these problems, Mr. Petit felt that
loans tend to be more effective than grants, but mechanisms have to be built in to encourage the right
kind of changes. Furthermore, recipients are national governments, and many efforts have to
be carried out on a regional basis, making the need for better donor coordination even more compelling.
This can be facilitated by policy dialogue, an approach for which World Bank has a comparative
advantage with its excellent access to decision-makers at all levels. In these areas then, Mr. Petit’s new unit will seek to promote changes, correct weaknesses and encourage partnerships.

Andrew Steer

Mr. Steer, director of the World Bank’s Environment Department, noted that the World Bank’s lending portfolio has grown from $1 billion to $10 billion in six years and includes 140 projects. Half of the funds are for dealing with pollution in urban environments, 35 percent for natural habitat protection, and 15 percent for broad-based and local-level institution building. The latter includes strengthening in-country capacity to understand and form environmental policies. Many World Bank projects have grown out of national environmental action plans. Since Rio, Mr. Steer said, some 80 countries have prepared national environmental strategies. Not enough, however, address the need for scientific research.

In this regard, there are three basic areas that require urgent investigation. One is to establish basic facts about the environment. It is not even known, Mr. Steer pointed out, whether deforestation is getting better or worse, or whether there are 30 million or one billion species living in tropical ecosystems. A second set of research topics relates to the costs and impact of environmental damage. Also critical, is more analysis and research of technologies and practices for solutions.

Looking at the World Bank’s financing strategy, Mr. Steer admitted that not enough projects have sufficient funding to strengthen local research capacity in environmental sciences. However, this is now considered a high priority, and existing and proposed projects are being reviewed in that light. Exceptions are major loans for forestry and biodiversity, which have research-capacity building components. India, for example, received $45 million exclusively for forestry research. CIFOR and ICRAF are integrally involved. Mr. Steer also mentioned the World Bank’s Global Environmental Facility (GEF) as a mechanism for targeting more funds for technology development. He did see a weakness in the tendency to extend support country-by-country, institution-by-institution, and project-by-project. “We need to do a much better job,” he said, “to make the whole add up to more than the sum of the parts.”

A Global Research System for Agriculture and the Environment

Panel Discussion

Chair: Klaus Lampe, IRRI
Discussants: Uma Lele, University of Florida
Wanda Collins, IPGRI

Chairman’s Remarks

Setting the stage for the panel presentations, IRRI director general Klaus Lampe argued that the need for environment-conscious food research and development is immense. But so is the public ignorance and lack of action to support it, he added. Since 1972, the CGIAR has invested $4 billion. Yet an international airport that opened recently cost $15 billion. Political will is required to put food concerns back on the priority list. Agricultural sciences no longer attract the high quality human capital needed to solve the problems of the next generation and next century. Mr. Lampe said, “We cannot expect young, bright, dynamic high school students to study agriculture as long as food
research-related disciplines are not given political support and priority." Furthermore, institutions established a generation ago urgently need to be rehabilitated. Along with physical rehabilitation, scientists must be provided with in-service training and adequate operational funds to do good research. Financial incentives, he concluded, must be given both in the North and South to promote effective collaboration.

Uma Lele

Re-engagement of American science is fundamental in order to bridge the intellectual gap between industrialized and developing countries. This was the theme put forward by Uma Lele, professor at the University of Florida and 20-year veteran of the World Bank. Twenty years ago, she said, the U.S. was playing a major role in making the green revolution possible through extensive bilateral and multilateral support to developing country institutions and universities. Bilateral assistance was also a major source of funding and involvement for U.S. universities. Consequently, the tremendous decline in U.S. assistance has had a serious impact on agricultural research conducted at universities and the quality of scientific collaboration with developing countries. One result has been stronger links to the private sector and a stronger orientation to U.S. clients, who often fear competition from developing countries. Also, with the advances in molecular biology, agriculture has developed stronger ties to the basic sciences.

Nonetheless, the U.S. still produces one third of graduates from developing countries who receive training abroad. There is also a vast pool of human capital on American campuses that could be tapped to work on Third World problems. Ms. Lele discussed a program she was developing to bring about stronger and more productive interchange between developing countries and the U.S. It involves a funding mechanism to support a competitive grants program that would partner the best of American science to collaboration with CGIAR institutions and developing country institutions. Private foundations are being approached to provide the seed money, but public sector investment is anticipated.

Wanda Collins

Representing a U.S. perspective, Wanda Collins, professor of horticultural science at the University of North Carolina, reviewed some of the strengths U.S. universities can bring to bear on Third World problems and some impediments to closer collaboration. Each year the U.S. spends $5 billion on agricultural research. There is a vast pool of human resources. People are well trained in a wide range of expertise, and usually backed by excellent facilities. The U.S. has a track record for success in agricultural and environmental research, with a history of multi-disciplinary and participatory approaches to research problem solving and technology development. "Most of all," Ms. Collins said, "we have a strength in basic sciences, which underpin technology development." This is especially true for the field of molecular biology.

Funding constraints are the most serious impediment. Although there are many actors involved in agricultural research in the North, the U.S. land grant universities are key players. Unfortunately, a less than positive environment for international agricultural activities exists on many campuses. Faculty are not provided with adequate incentives to commit time and effort to develop international activities. Resource allocations are based on research projects and there is no provision for international work. Professors must find their own funds. Thus, international agricultural research has
been eroded to projects conducted on a scientist-to-scientist basis. Institutional support for international activities is essential, Ms. Collins insisted. It permits sustained interaction over a long period and makes it possible to engage a wider range of expertise.

Ms. Collins also pointed out that apart from molecular genetics, the number of American graduate students in agriculture is declining. Agriculture suffers from an image problem and lack of high paying jobs. Ultimately, she argued, what is happening at universities reflects the lack of political will in the U.S. to support and recognize the importance of international agricultural research or even agricultural research in general.

Ms. Collins offered two specific recommendations. She suggested that training be looked at in a fresh light. Costs of international graduate training are becoming prohibitive. New approaches must be found. She mentioned an experimental project using telesatellite communications. This minimizes the time students need to be out of their country and maximizes the value of their research by focussing it on local problems. Ms. Collins also argued strongly for integration of agricultural and environmental studies. Sometimes these departments are not located on the same campus or even at the same university. Integration of the two fields implies a broader set of research skills than most agricultural researchers now possess, and an integration of methodologies and philosophies. Yet, future technologies can only be viable if they are both agriculturally and environmentally sound.

Building National Science Capacity: The Role of External Support
Panel Discussion

Chair: C. Bonte-Friedheim, ISNAR
Discussants: Johan Holmberg, SAREC
Tim Rothermel, UNDP

Chairman’s Remarks

In his introductory remarks, ISNAR director general Christian Bonte-Friedheim drew on the report of a recent international donor conference on support for developing and strengthening research capacity in developing countries. Capacity development, he stated, encompasses three distinct components: human resources, institutional and organizational capacity and the enabling environment. The latter includes policies, financial support, research priorities, links with clients and the professional environment in which researchers operate. This means their status in society, incentives, ease of movement, research standards and the research tradition. These elements, he pointed out, have received uneven support from donors. Traditionally, donors have concentrated on training, physical infrastructure, project support, institutional cooperation and lately networks. In the future, action needs to focus on national policies and commitments to research; dissemination of results; linkages between researchers and end-users; planning, priority setting, monitoring and evaluation; the professional environment; achieving the necessary critical mass of scientists in those disciplines required to carry out interdisciplinary research; and finally, national and international linkages. In the past, capacity building has also suggested short-term solutions. What is needed are long-term commitments and cooperation, even though benefits to donors may be not easily recognized.
Johan Holmberg

The CGIAR, said Mr. Holmberg, director of programs at SAREC, tends to concentrate on the role and capacity of NARS and overlooks the state of universities in the equation. Universities are in a deplorable state in many developing countries, he argued. In some cases there is no paper or chalk or equipment for the laboratories. Yet it is at these universities that the scientists and technicians who must carry out the work of NARS are educated.

The faculties of science and engineering have been hardest hit. Both are rooted in experimental work in the lab and in the field. They rely on functioning laboratories, equipment, chemicals, vehicles and other consumables, all of which are in short supply. Secondly, there are not enough job and career opportunities for science graduates. A third problem is lack of renewal in teaching staff in scientific subjects.

Without some capacity for research, Mr. Holmberg insisted, these countries will have difficulty absorbing important technologies, let alone creating new scientific knowledge necessary for their own development. SAREC regretted the present donor trend not to fund basic sciences, and called on donors to increase funding for post-graduate research training, national research projects, university operations, and higher education. Higher education is basic to everything, he stated. University systems must be functioning, they must have a minimum of resources to work with, and they must have clear priorities and strategies.

Sweden itself is pursuing this course. Mr. Holmberg advocated the "sandwich" approach to avoid the problem of brain drain in post-graduate training. In this approach, candidates attend courses and receive their degree from a northern university, but conduct their thesis research in their own countries. In addition, Sweden supports the Third World Academy of Sciences, the International Science Foundation in Stockholm, and the international science programs of the University of Upsala.

Ultimately, Mr. Holmberg concluded, a supportive policy environment is critical for science to work. Policies must ensure autonomy and academic freedom as well as financing, accountability and quality control. Given the current climate of scarce resources, donors need to concentrate on improving coordination and employing existing resources more effectively. SAREC will be convening a meeting next year to explore these possibilities.

Tim Rothermel

Despite the decline in funding from traditional donor sources, UNDP director Tim Rothermel expressed optimism about the future of support for science in development. Growth in market economies, private sector investment and democratization, he argued, will lead to increased financial flows.

Removal of trade barriers by industrialized countries could increase developing country exports by as much as 50 to 100 percent. These income gains, about $40 to $80 billion annually, could double official development assistance of Third World countries. Private investment in developing countries, particularly in populous countries such as Brazil, China, India, Indonesia and Nigeria, has increased from $5 billion in 1970 to $102 billion in 1992. Another modality for increasing financial resources is a formula proposed by the UNDP. The 20:20 compact calls for reallocating existing
resources by shifting 20 percent of national budgets from less important categories, such as military spending, to human priorities. Finally, Mr. Rothermel pointed out that many countries are strengthening their democratic processes. Technical cooperation for electoral assistance is growing rapidly, he reported. UNDP is engaged in some 40 countries. In countries where a large proportion of the population is involved in agriculture, he anticipated that voters themselves will be a voice for advocating science policy and capacity to serve their needs.

Although new financial flows will not translate directly into building science capacity, they will contribute to supporting the scientific input needed by developing countries to reduce hunger and disease and improve the environment and education. Funding for scientific capacity building, Mr. Rothermel argued, should be targeted, have a clear goal, and it should be premised on high standards of quality. As an example, he cited the International Network for Genetic Engineering of Rice (INGER). This has been described as a success story for IRRI, UNDP and CGIAR, with its focus on quality science, and ownership by national systems and farmers. He also suggested that more extensive use of the community-based, bottom up approach to setting science and research agendas will enhance their relevance.

In concluding, Mr. Rothermel reminded the audience of the CGIAR’s key role. Although the CGIAR represents only a small percent of funding going to capacity building, its 1000 scientists around the world, working in close collaboration with national researchers, create an important multiplier effect in building science capacity in developing countries.

Tomorrow's World: Trends in Science
Presentation by Gordon Conway, Vice Chancellor, Sussex University

Mr. Gordon Conway, invited to share his vision of the future, promised that it would indeed be personal and individual. However, he reminded his audience, the New Scientist ranks science fiction writers as the best predictors of the future.

The thrust of Mr. Conway’s presentation was technological innovations and where they are leading society. Reoccurring themes included the notion of targeting, design, interaction between biological and physical sciences, and the interrelationship between technology and people’s livelihoods. Beginning with the information technology, Mr. Conway marveled at the remarkable speed of computation, transmission and communication. He also noted the rapid decline in prices for machines that are getting ever smaller. Televisions and phones, he predicted, will give way to multi-purpose computers linking users throughout the world. And in the not too far off future, they will serve as gateways into the realm of virtual reality. He expressed concern about ownership, and the blurring of lines between education and entertainment, but felt that ultimately the new technology would lead to more democratic connections.

In terms of energy, Mr. Conway predicted that the future lies in harnessing the energy within the cell wall. In fact, he said, the cell wall is an incredible miniature computer with enormous potential.

Materials are already experiencing a quiet revolution with a proliferation of smart materials that respond to environmental stimuli. For example, optic fibers in buildings can sense corrosion and counter it. Smart materials could eventually be used in agriculture to deliver nutrients or chemicals. The revolution in genetic engineering was more familiar to the audience, Mr. Conway assumed and
highlighted only the growing emphasis on designing plants and animals to meet consumer needs. He was conservative about the extent to which genetic engineering can solve such complex problems such as drought, salinity, and nutrient deficiencies. These problems are best understood through the science of ecology.

In ecology, powerful, discreet differential and analytical mathematical models are being used to understand the fundamental problems of competition, predation, parasitism and mutualism. Applications are beginning to have an impact on such areas as integrated pest management and cropping systems design.

Integration of computer modeling, imagery and robotics also offers exciting opportunities. Mr. Conway saw an important test application in management of irrigation systems. Little robots are being developed based on insect systems, but artificial intelligence is a long way off, he guessed. On the other hand, a new type of systems analysis based on qualitative information could make it possible for farmers, ecologists and molecular biologists to work together in farms and villages and design new systems. Mr. Conway observed from his own experience the enormous capacity of rural villages to use simple diagnostic tools to analyze their unique situations.

A hazard of the computer revolution, Mr. Conway cautioned, is the trend towards what he called mix-and-match education. More than ever, solving problems will require people who are trained with a capacity to be interdisciplinary. This means transferring their skills intellectually and practically from one discipline to another. Such depth of knowledge cannot be achieved by dabbling in a palate of subjects. Universities in the West and Third World must insist that disciplines continue be learned in an ordered, sequential way, based on essential building blocks of knowledge. Mr. Conway marveled at the enormous capacity human beings have to learn, analyze, innovate and be creative. The villages of the Third World are full of bright, young people. Finding and nurturing these bright, young people, he concluded, is our most important job.

Towards an Action Program: Summing Up
Ismail Serageldin, CGIAR Chairman

Reflecting on the excellent presentations, Mr. Serageldin recognized that they raised many questions, qualms, suggestions and ideas. Still, none challenged the basic premise that science and support to science is essential to the CGIAR’s mission. It is true, he agreed, that technological revolutions are opening fantastic opportunities. They offer liberating potentials. But one cannot predict that the potential for welfare will be translated into reality. There must be a mechanism for discrimination and discernment. Therefore, technology represents a tool whose risks are almost as large as its advantages. "I think your vision of farmers working with molecular biologists is an inspiring one," he said referring to Gordon Conway’s remarks, "even though I suspect that it will not come about."

Some would say, he admitted, that the arithmetic is such that it probably is not attainable to close the knowledge gap between the North and South. Yet, even though the challenges may seem insurmountable, he went on, the vision of bringing science to bear on the problems of the poor and mobilizing, empowering and liberating the people and talents throughout the Third World requires the CGIAR to take on board the idea of the promotion of science as more than lip service, but as an ideal worthy of its support, its endeavors.
SPECIALIZED ACTIVITIES

The CGIAR decided at ICW94 on the establishment of a Committee on Genetic Resources, a Task Force on Sustainable Agriculture, and a Task Force on Ecoregional Approaches to Research. Their terms of reference and composition appear below.

COMMITTEE ON GENETIC RESOURCES

Terms of Reference

The purpose of the Committee is to advise the CGIAR on policy matters regarding genetic resources issues and to assist the Chairman of the CGIAR in his leadership role in this area. The Committee aims to enhance the openness and transparency of discussions on genetic resources policy issues within the CGIAR community.

More specifically, the Committee has as its tasks to:

1. Examine policy, legal, and ethical issues regarding genetic resources and recommend CGIAR action as and when necessary.

2. Monitor the Convention on Biodiversity and the FAO Commission on Plant Genetic Resources processes as they relate to the CGIAR and recommend CGIAR policies or mechanisms as necessary.

3. Monitor the implementation of the CGIAR agreement with FAO regarding the placement of ex situ plant genetic resources collections of the centers under the auspices of FAO and recommend CGIAR action, if necessary.

Appointment, Reporting, and Support Staff

1. The Committee has been appointed by the CGIAR upon the recommendation of the CGIAR Chairman, following consultations with the CGIAR constituency.

2. The members of the Committee serve in their personal capacities and have an initial term of two years. The Committee can co-opt experts from inside or outside of the CGIAR to assist in its work as resource persons. IPGRI will provide secretariat and support on technical matters.
Terms of Reference

The goal of the Task Force is to advance the understanding of the concept of sustainable agriculture within and outside the CGIAR system, ensure that CGIAR research endeavors in sustainable agriculture are fully informed of, and coordinated with, research initiatives of others, and to identify gaps in the global research agenda.

1. Further review and clarify sustainable agriculture as a concept in the context of the CGIAR mission of providing food security in developing countries.

2. Identify, specify and prioritize the issues and themes in sustainable agriculture which require further international research, taking into account factors such as population growth, available land and water resources, environmental and geographical conditions, and policy concerns, in particular poverty alleviation, conservation of nature, and management of natural resources.

3. Review the agendas of the major research institutions internationally active in sustainable agriculture.

4. Identify the role of the CGIAR within this portfolio of priorities, and in relation to the other major institutions active in the field.

5. Define the need for institutional adjustments in the CGIAR research infrastructure and its interfaces with other research institutions active in the field.

Composition

Chair: M.S. Swaminathan

Members: Bo Bengtsson
Jurg Benz
Robert Bertram
Adel El-Beltagy
Geoffrey Hawtin
George Rothschild
Maria Zimmermann
ANNEX V

Members:  
Dennis Greenland, UK  
Richard Harwood, USA  
Armando Rabufetti, Uruguay  
Mandivamba Rukuni, Zimbabwe

This Task Force will meet for the first time in January 1995 in the Hague and will report to the CGIAR mid term meeting in May 1995 in Nairobi, Kenya.

TASK FORCE ON ECOREGIONAL APPROACHES TO RESEARCH

Terms of Reference

The goal of the Task Force is to advance the understanding of the ecoregional concept within and outside the CGIAR system, ensure that the CGIAR approach is fully informed of and coordinated with research approaches of others.

Specifically the Task Force will:

1. Evaluate the ecoregional approach to research evolved by the CGIAR as a means of reconciling productivity improvement with natural resource conservation.

2. Clarify the goals of the approach and further evolve the concept.

3. Evaluate the ecoregional approach as a vehicle for:
   - building closer partnerships among institutions with complementary skills;
   - promoting wider transnational collaboration in research among developing countries; and developing a research paradigm appropriate for wide use by national institutions in achieving sustainable agriculture.

Composition

Chair:  
Cyrus Nderitu, Kenya

Members:  
I.P. Abrol, India  
Rob van den Berg, Netherlands  
Hubert Manichon, France  
Gustavo Nores, Argentina

The Task Force will meet for the first time in London in January. It will report to the CGIAR mid term meeting in May 1995 in Nairobi, Kenya.
### Time-Table for Action

The following 18-month time table for renewal and revitalization was adopted by the CGIAR at its Delhi Mid-Term Meeting:

- **At the New Delhi Mid-Term Meeting of the CGIAR (May 1994), develop a shared vision among donors of how to build a more effective system that is funded in a predictable and sustainable fashion.**

- **Follow-up on the consolidation and elaboration of the proposals adopted (summer 1994)**

- **Formally adopt the proposals to be submitted to donor authorities for their consideration (International Centers Week, October 1994)**

- **Invite participation at a high-level special meeting to engage donors in the future directions for the CGIAR (November 1994)**

- **Ministerial-Level Meeting (February 1995)**

- **Definition of needed changes and instruments (Spring 1995)**

- **Adopt the detailed changes and instruments (Mid-Term Meeting, May 1995)**

- **Action in capitals, and ratification if needed (Summer 1995)**

- **Final adoption of new structures, procedures and programs (International Centers Week, October 1995)**

These changes would enable the renewed CGIAR to become effective by January 1996.
# List of Documents

<table>
<thead>
<tr>
<th>Document No.</th>
<th>Document Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICW/94/00</td>
<td>Administrative Arrangements/Participant Attendance and Hotel Reservation Form</td>
</tr>
<tr>
<td>ICW/94/01/Rev.1</td>
<td>Schedule of Events and Ancillary Meetings</td>
</tr>
<tr>
<td>ICW/94/02/Rev.1</td>
<td>Revised Draft Agenda</td>
</tr>
<tr>
<td>ICW/94/03/Rev.1</td>
<td>List of Documents</td>
</tr>
<tr>
<td>ICW/94/04</td>
<td>Annotated Agenda</td>
</tr>
<tr>
<td>ICW/94/08</td>
<td>Report of the Fourth Finance Committee Meeting, September 15-16, 1994</td>
</tr>
<tr>
<td>ICW/94/09</td>
<td>New Financing Arrangements: Re-engineering the CGIAR Planning, Budgeting and Funding System</td>
</tr>
<tr>
<td>ICW/94/10</td>
<td>1995 Funding Requirements of the CGIAR and Tentative Financing Plan</td>
</tr>
<tr>
<td>ICW/94/12</td>
<td>Sustainable Agriculture for a Food Secure World: A Vision for International Agricultural Research--Prepared by a Panel Chaired by Gordon Conway</td>
</tr>
<tr>
<td>ICW/94/13</td>
<td>A Research Agenda for the Future</td>
</tr>
<tr>
<td>ICW/94/14</td>
<td>Report of the Study Panel on the CGIAR’s Long-Term Governance and Financing Structure</td>
</tr>
<tr>
<td>ICW/94/14/Add</td>
<td>Summary of Conclusions and Recommendations</td>
</tr>
<tr>
<td>ICW/94/15</td>
<td>Report of the CGIAR Stakeholder Panel</td>
</tr>
<tr>
<td>ICW/94/16</td>
<td>Report of the First Steering Committee Meeting, September 15-16, 1994</td>
</tr>
<tr>
<td>Document No.</td>
<td>Document Title</td>
</tr>
<tr>
<td>-------------------</td>
<td>---------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>ICW/94/18</td>
<td>Improving the External Review Process in the CGIAR</td>
</tr>
<tr>
<td>ICW/94/19</td>
<td>Report of the Fifth Meeting of the CGIAR Oversight Committee</td>
</tr>
<tr>
<td>ICW/94/21</td>
<td>Soil, Water and Nutrient Management--The Zschortau Plan</td>
</tr>
<tr>
<td>ICW/94/22</td>
<td>Future CGIAR Meetings</td>
</tr>
<tr>
<td>AGR/TAC:IAR/94/8</td>
<td>IIMI External Programme and Management Review</td>
</tr>
<tr>
<td>AGR/TAC:IAR/94/11</td>
<td>Review of Proposals for Systemwide and Ecoregional Initiatives</td>
</tr>
</tbody>
</table>

The 1995 Plan of Work and Budget for the International Livestock Research Institute (ILRI) (plus a supplement which contains a proposal for a CGIAR System-Wide Livestock Initiative)—Prepared by the Rockefeller Foundation as Implementing Agency

Strategic Plan for Livestock Research in the CGIAR System and the ILRI Indicative Medium-Term Plan—Prepared by the Rockefeller Foundation as Implementing Agency

INTERNATIONAL CENTERS WEEK 1994

October 24-28, 1994

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