



**CGIAR 1998 Mid-Term Meeting**

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**Brasília, Brazil  
May 25 – 29, 1998**

**Summary of Proceedings and Decisions**

*Mobilizing Science  
for Global Food Security*



**Consultative Group on International Agricultural Research  
(CGIAR)**

## *CGIAR Centers*

Centro Internacional de Agricultura Tropical (CIAT) • Cali, COLOMBIA

Center for International Forestry Research (CIFOR) • Jakarta, INDONESIA

Centro Internacional de Mejoramiento de Maiz y Trigo (CIMMYT) • Mexico City, MEXICO

Centro Internacional de la Papa (CIP) • Lima, PERU

International Center for Agricultural Research in the Dry Areas (ICARDA) • Aleppo, SYRIAN ARAB REPUBLIC

International Center for Living Aquatic Resources Management (ICLARM) • Makati City, PHILIPPINES

International Centre for Research in Agroforestry (ICRAF) • Nairobi, KENYA

International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) • Patancheru, INDIA

International Food Policy Research Institute (IFPRI) • Washington, DC, USA

International Irrigation Management Institute (IIMI) • Colombo, SRI LANKA

International Institute of Tropical Agriculture (IITA) • Ibadan, NIGERIA

International Livestock Research Institute (ILRI) • Nairobi, KENYA

International Plant Genetic Resources Institute (IPGRI) • Rome, ITALY

International Rice Research Institute (IRRI) • Los Baños, PHILIPPINES

International Service for National Agricultural Research (ISNAR) • The Hague, NETHERLANDS

West Africa Rice Development Association (WARDA) • Bouaké, CÔTE D'IVOIRE

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# *Mobilizing Science for Global Food Security*



**Issued by the CGIAR Secretariat**

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# Overview



**CGIAR 1998 Mid-Term Meeting**

**H**is Excellency Fernando Henrique Cardoso, President of the Federal Republic of Brazil, formally opened the CGIAR's 1998 Mid-Term Meeting (MTM98) at a ceremony at the Itamaraty Palace in Brasília, Brazil. During the meeting, which was held from May 25 - 29, 1998, the Group welcomed the distinguished System Review Panel, led by Maurice Strong.

The System Review Panel's forthcoming report will focus on how the CGIAR system should function, the research agenda, and related issues. At MTM98, the System Review Panel presented preliminary findings on the CGIAR's science and strategy, governance, structure, and finance. Mr. Strong called the CGIAR "the best single investment in Overseas Development Assistance, bar none." He said that the \$5.2 billion expended between 1972 and 1977 on the CGIAR has been accountable for virtually doubling food production in developing countries. The Panel interacted extensively with members and participants in plenary, committee, and consultation sessions during MTM98 — these discussions will help shape the final report.

A hallmark of MTM98 was the effective way in which all components of the System worked together to reach consensus on issues that are crucial to the CGIAR's mission and, at the same time, fraught with complexities. The Chairman put forward a set of propositions to guide the Group on issues requiring action. He also identified substantive issues for consideration.

Through combined efforts and goodwill, the Group reached closure on a phase of consultation and policy formulation about biotechnology that began at a stakeholders meeting in April 1997. The Group agreed on the potential importance of biotechnology as an instrument to help the poor and the environment, although they rejected the notion that it is some kind of magic bullet. Whatever the CGIAR undertakes will be within the ambit of agreed-upon ethical principles, with necessary precautions to ensure safety. The Group clarified the CGIAR's stand and the CGIAR centers' current practices on genetic resource management, collaboration with the private sector, patenting and other important issues.

The Group also endorsed the Chairman's propositions to:

- request the Oversight Committee, in coordination with the Secretariat, to improve governance and streamline the CGIAR's way of doing business;
- request the Finance Committee to move from emergency fire-fighting and crisis management to a more strategic financing approach; and
- endorse the recommendations on gender staffing, including commitments to support focused efforts to address gender staffing and staff diversity issues.

An important outcome of the debate helped clarify the respective roles of CGIAR members and the Centers in policymaking, which strengthens the roles and responsibilities of both. This will help the CGIAR adapt to new events, including the recommendations by the System Review Panel, new national laws, and international statutes.

In light of the growing recognition that there are common threads between climate change and agricultural research, the CGIAR invited Robert Watson, Chairman of the Intergovernmental Panel on Climate Change (IPCC) and Director of the World Bank's Environment Department, to MTM98. Mr. Watson presented an overview of the latest scientific findings on climate change, the projections of climate models, and the significance for agriculture and forestry. Louise Fresco, Director of the Sustainable Development Department at FAO, presented a scientific analysis of the potential risks and opportunities from climate change, and the implications for the CGIAR.

The success of MTM98 would not have been possible without the strong and generous sponsorship of the Brazilian Agricultural Research Corporation (Embrapa), a CGIAR member since 1984. For over 20 years, the CGIAR and Embrapa have worked together to bring food security to poor people living in Brazil's rural areas. Embrapa has also extensively participated in CGIAR decisionmaking and in setting research priorities.



# *Major Decisions*



**CGIAR 1998 Mid-Term Meeting**



*The Group made the following major decisions at the 1998 Mid-Term Meeting in Brasília.*

- 1.** The Group admitted Uganda to CGIAR membership by acclamation, bringing the South-North balance of member countries to 20-23 and the total number of members to 58. (See pages 23.)

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- 2.** The Group requested the Oversight Committee, in coordination with the Secretariat, to improve governance and streamline the CGIAR's way of doing business. (See pages 49-50.)

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- 3.** The Group requested the Finance Committee to move from emergency fire-fighting and crisis management to a more strategic financing approach. (See page 40.)

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- 4.** The Group endorsed the recommendations of the recent consultation on gender staffing and made a commitment to support focused efforts to address gender staffing and additional staff diversity issues. (See page 53.)

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- 5.** The Group accepted the reports of the expert panels on General Issues in Biotechnology and Proprietary Science and Technology. (See pages 30-37.)

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- 6.** The Group supported the propositions of the Chairman regarding biotechnology, intellectual property rights, and genetic resources and:
  - agreed that a central advisory capacity should be developed on biotechnology and legal issues;
  - adopted a set of ethical principles relating to genetic resources. The ethical principles are included in the set of guiding principles and procedures for CGIAR Centers to follow when dealing with biotechnology, intellectual property rights, and genetic resource issues;
  - agreed that the Centers will conduct a Material Transfer Agreement (MTA) and Intellectual Property Rights (IPR) audit to determine that Centers are in full compliance and follow satisfactory procedures;
  - agreed that the Centers should jointly review with FAO current trust agreements covering germplasm collections and made recommendations about areas needing clarification;

- agreed that the Centers’ policies and practices in biotechnology, genetic resources, and intellectual property rights, listed below, will be made public;
- agreed that the CGIAR should be instrumental in helping convene a genome meeting. (See page 35.)

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**7.** The Group received a set of guiding principles and procedures for Centers to follow when dealing with biotechnology, IPR, and genetic resources issues. Developed by the board chairs and center directors in response to the request of the Chairman in his opening remarks, the package includes the following:

- the CGIAR’s Ethical Principles Relating to Genetic Resources (endorsed at MTM98);
- agreements between Centers and FAO placing collections of plant germplasm under the auspices of FAO;
- germplasm acquisition agreement for material intended for designation;
- Material Transfer Agreements (MTAs) for Designated Germplasm (available in two formats: one in contract form and the other using the “software” protection approach);
- statement on the steps Centers will take when they believe that a MTA may have been violated;
- guiding principles on intellectual property rights and genetic Resources;
- statement on principles involving center interaction with the private sector and others on proprietary technology; and
- Centers’ position statement on biotechnology. (See pgs. 35-36.)

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**8.** The Group agreed to consolidate and disseminate the package of materials and endorsed these other actions:

- reviewing and updating the above package of documents, which will involve clarifying and elaborating on these current practices at the Centers. The final text should be distributed for review at ICW98;
- completing an audit of current practices in the area of proprietary science and arranging for the development of advisory services;

- clarifying the existing FAO-Center trust agreements, to be agreed on by representatives of both parties. These agreements will set down appropriate definitions and details, which will serve as a binding set of principles for the use of CGIAR-held germplasm accessions. (See page 36.)

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**9.** The Group adopted a report from the Finance Committee on the 1997 financial outcome. In 1997, funding totaled \$333 million, compared to \$322 million in 1996. There were no major deviations from Centers’ research plans at the start of the year. (See pages 38-39.)

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**10.** The Group received the Finance Committee report that the outlook for 1998 continues to be stable. The 1998 funding forecast by Centers totals \$335-340 million, about 2 percent below the financing plan of \$345 million. Non-agenda funding is projected at about \$6 million, for a total outcome of \$340-345 million. (See pages 38-39.)

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**11.** The Group endorsed the substance of the 1999 Research Agenda recommended by TAC, and the Finance Committee recommendations, and commissioned the preparation of center financing plans, which will be approved at International Centers Week 1998. (See page 40.)

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**12.** The Group accepted the External Program and Management Review (EPMR) reports for IRRI, IFPRI, and CIMMYT, and endorsed the review panels’ recommendations. The Group also endorsed a report by ICRISAT on its follow-up to the EPMR. (See pages 41-46.)

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**13.** On the Cosponsors’ recommendation, the Group approved the appointment of Hans Gregersen as a member of the IAEG. (See page 49.)

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**14.** The Group accepted Germany’s invitation to host MTM2000 and the next Global Forum. (See page 51.)



# *Summary of Proceedings*



CGIAR 1998 Mid-Term Meeting

## *Chairman's Opening Statement*

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**by**  
**Ismail Serageldin**

### **Welcome**

Good morning, Ladies and Gentlemen:

Welcome to the 1998 CGIAR Mid-Term Meeting (MTM98). In keeping with established practice, MTM98 will commence with the Chairman's Opening Statement, followed by a brief period of comment and discussion. I will then make the Chairman's Announcements.

Let me start with a special welcome to Maurice Strong and his distinguished colleagues of the System Review Panel. As we all know, Maurice has been extremely busy, remodeling the United Nations, along with so many other things! We are truly delighted that he agreed to take on this important task, in what I know was a difficult time for him, and doubly glad that he is able to be with us today. We count on the wisdom and sagacity of the panel to guide us as we look to the future.

But even as we await the panel's report, there are urgent issues pressing on us now, as we speak.

### **The Tasks of MTM**

We will, as has been our tradition, use this MTM to discuss and approve the research agenda for 1999. The new research agenda is well embedded in the MTPs of the Centers, it reflects the best of current thinking, and it also reflects increasingly what I have referred to as the double shift in the research paradigm.

The first shift is to bring about the **contextualization of commodity research**. This requires the integration of crop-specific research, which has been so successful in the past, into a broader, more holistic vision. Important commodity research needs to continue, but it must increasingly be linked to ecoregional and sustainability imperatives. Geographically, this approach would emphasize the local or regional ecology. Thematically, it would focus on the synergies among livestock, forestry, aquaculture, and conventional farming. On the socioeconomic front, it would seek to increase the productivity and profitability of complex farming systems at the small-holder level. It would focus on the needs of the small-holder farmer, not the commercial monoculture concerns.

The second shift is to emphasize the **genetic imperative**. However, this raises a host of other questions on genetic resources, biotechnology, and intellectual property rights (IPR), which I will address in detail in a moment. But before I do so, there are two sets of issues that we must address:

- Take a hard look at our current governance and management arrangements, and
- Review funding arrangements, not just from the perspective of crisis management, but from a genuinely strategic vantage point.

To help us in our deliberations, I will try to frame some propositions under each of the headings that need action. I invite you to consider these propositions seriously. Let us keep them in our thoughts and deliberations as we go through the agenda of this week. I am very hopeful that we will reach conclusions on each of these items by the end of the week.

## Governance, Management, and Staffing

At the outset, let me state my own views: *Too many of our deliberations are focused on a plethora of subjects; thus, the short term and the “urgent” displace the long term and the important. We do not have enough strategic focus in our discussions. We do not have enough nimbleness and speed in our decisionmaking.*

The formal meetings of the CGIAR, and the business that is transacted there, may perhaps be more effectively transacted with fewer pro-forma reviews of reports that do not raise specific issues of contention, and a lengthier, deeper discussion of the ones that do raise important issues. This may require a new approach by which we would circulate in advance of the meeting some documents specifically designated for approval without formal discussion. Likewise, some of the information reports could be circulated without formal review and discussion.

Items proposed for such streamlined procedures could always be subjected to a formal discussion if a number of members — say, five (5) — specifically ask the CGIAR Secretariat for such a discussion. Our Standing Committee reports could be treated the same way, if the membership agrees.

This would result in a less dense agenda, with more time for in-depth discussion covering fewer items. Those delegates who want to make important statements for the record could do so in writing. These statements could be circulated at the meetings and reproduced in the Secretariat’s formal Summary of Proceedings. All of this would create more focused meetings with deeper discussion of substantive issues.

There is a balance to be struck between that and the informal participatory style we have been using to such good effect in a number of cases. Let us not throw out the baby with the bath water.

### PROPOSITION # 1

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*The streamlined approach is hereby adopted and the Oversight Committee is charged — in coordination with the Secretariat — with the task of designating the items to be treated under the streamlined procedure and the construction of the agenda for the next meeting.*

Let’s turn, meanwhile, to all the other meetings, formal and informal, that sprout like so many mushrooms around the main meetings.

The networking, the discussions, the opportunity to catch up on many things with old friends, the making of new acquaintances in ways that e-mail can never replace; all that is something of an externality that can be added to the benefits of the main meeting where formal business is being transacted. The fact that these activities revolve around the formal meetings of the CGIAR simply reflects the reality that the CGIAR is the most organized of the various actors in that vast coalition of many different groups that is becoming the *Global Forum for Agricultural Research*. The presence of the groups in parallel meetings at the same physical location at the same time as the CGIAR convenes, surely is an enormous efficiency in bringing to life that Global Forum of all interested parties; the IARCs, the NARS, the AROs, the private sector, the NGOs, and the farmers’ associations.

That reality should not be confused with the actual business meeting of the CGIAR itself and how to streamline it. That is a thought I would like to leave with you all and with the members of our System Review Panel.

## Finance, Funding and Staffing Issues

### FINANCE AND FUNDING

The business of funding our research agenda is the *raison d'être* for the CGIAR. So it is not unreasonable that we address it here, yet again! I take pleasure in noting that a number of donors have made important efforts to increase their contributions in 1997. Some are announcing significant increases in 1998. Specifically, I am very pleased to announce that Norway and Sweden have made substantial increases, reaching about 50 percent. Please give them a round of applause.

Despite such efforts, problems press on the Centers. I have spoken about them before, but far from abating they have become even more acute. The problems areas include the following.

- The balance between restricted and unrestricted funding. We must have more unrestricted funding if the centers are to have flexibility and resilience.
- The refusal of some donors to pay the overhead associated with programmatic or project work, which is contrary to the spirit in which we had agreed on the matrix formula.
- The dwindling reserves of the centers, and their inability to build up these reserves because of the limited availability of unrestricted funds.
- The delays of disbursement on pledged funding, which results in lost income, bridge loans, and interest payments, not to mention the hidden costs in terms of morale erosion due to uncertainty.
- The variability of the currency fluctuations: donor currencies versus dollar, local currencies versus dollar.

Increasing volatility is going to be part of the continuing funding landscape. We must prepare for it. This will require greater reserves at the Center level and at the systemwide level. This issue along with all the others I have just listed will require some **strategic thinking** about funding to introduce more stability, predictability, transparency and accountability.

The possibilities for nonconventional funding sources also need to be explored. The link to public awareness campaigns should not be as tenuous as they have been in the past. All of this cannot be addressed by a Finance Committee overwhelmed with the fire fighting of crisis management. We will need to establish the basis for a strategic review of the funding issues, and come up with a real overhaul. We need it now.

### PROPOSITION #2

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*The Finance Committee should be asked to take the necessary steps to move from crisis management to strategic issues. A mechanism should be in place for the first such strategic effort to be launched by ICW 98.*

I cannot leave the issue of financing without raising two more issues that you know well, and about which we must do better. First, is the increasing divergence between actual targeted donor funding and some agreed activities of great importance. These underfunded activities include some systemwide initiatives dealing with natural resources management, such as Alternatives to Slash-and-Burn and water harvesting, as well as some work of undoubted scientific excellence that requires long-term support, such as the livestock biological work on animal disease resistance. It is saddening to see some cutting edge work underfunded when so many of our developmental assistance, some \$50–60 billion of it, is going to enterprises of much less importance with lower returns.

Second, let us do more substance with less process. Do not micromanage the Centers. Reduce the demands for reporting and liberate the time and energy of the Centers for the science that we are all here to make possible.

### STAFFING

The centers are going through a difficult process of adaptation. They are forced to deal with the reduction of the unrestricted funding as well as with changing employment practices. We must not allow the funding situation to affect the ability of the CGIAR to recruit and retain the very best scientists that we can get. Also, the effort to reach out and promote gender and nationality diversity, compatible with the absolute commitment to excellence, should not be weakened or jeopardized.

Centers will need a twenty-first century workforce for twenty-first century efforts. When this group discussed gender issues at the Paris MTM, the CGIAR system was lagging behind many other institutions. It has since moved forward as the result of a well-organized and dedicated effort, enthusiastically supported by a group of donors. The gender **research** component of this effort was mainstreamed into the CGIAR's programs last year. The future of the gender **staffing** component was the subject of an important consultation held in the Netherlands some weeks ago. Let us pursue the results of this consultation.

### PROPOSITION #3

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*The group formally endorses the recommendation of the consultation, and commits itself to support focused efforts to address gender staffing issues and expand these efforts to include additional staff diversity issues.*

### Genetic Resources, Biotechnology, and IPR

These are not new issues. We have lived with them for a long time. We have had an excellent committee on PGR that has advised us well on many issues, and that has given us valuable tools like *The Guiding Principles on IPR and Genetic Resources*, and the model MTAs. But the changing world keeps forcing these issues upon us with renewed vigor. A year ago in Cairo, we agreed to ask TAC to form two panels, one dealing with biotechnology and one with proprietary science. They have now submitted their reports, and we thank them for their enormous efforts and their valuable reports. Starting from their recommendations and the comments that I have heard and read, and many of the excellent documents that the CGIAR has produced to guide our actions in these complex areas, I would like to craft some propositions for your consideration.

There are three issues to be considered:

- The CGIAR germplasm collections,
- Patenting and Intellectual Property Rights, and
- Why and how we use biotechnology.

Although these three overlap and intertwine in many ways, each is nevertheless distinct and could be profitably discussed as a discrete issue.

**THE GERmplasm COLLECTIONS**

The CGIAR centers must review their MTA agreements, and harmonize them in a clear and unambiguous manner. Divergences should be for functionally related reasons, e.g., the differences in managing the germplasm of livestock or fish or trees.

**PROPOSITION #4**

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*The center directors should complete their review of existing practices, and adopt the “official text of the CGIAR MTA” and a formal public announcement about this should be made at the end of MTM.*

The CGIAR has a set of policies and instruments to guide and provide coherence to its work with genetic resources:

- ethical principles;
- agreements with FAO covering 500,000 accessions;
- guidelines on designating material with FAO (under development);
- Guiding Principles on Intellectual Property Rights (which are being elaborated to address new issues and changed circumstances).

In regard to designated germplasm, CGIAR centers agree to use:

- a common Germplasm Acquisition Agreement, and
- a common Material Transfer Agreement (the text for which was endorsed by the ICWGGR).

In addition, the Genetic Resources Committee of the CGIAR has agreed on May 4 of this year on specific steps to be taken when Centers believe that these MTAs may have been violated.

The CGIAR should evolve a clear policy position on the management of germplasm that builds on all of that, with a view to articulating that position not just in the FAO sponsored fora flowing from the Leipzig process but also the Conference of Parties discussions of the Convention on Biological Diversity, the TRIPS review process in 1999 and the potential launch of the next World Trade Organization round in 2000.

**PROPOSITION #5:**

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*The Centers should complete work on the remaining items for a more comprehensive genetic resources policy. The center boards should adopt this germplasm policy and empower representatives of the CGIAR to present it on their behalf in the multiplicity of fora where these issues arise. This should be completed by ICW98.*

**INTELLECTUAL PROPERTY RIGHTS**

The patenting situation is extraordinarily complicated. But it may serve our purposes to distinguish between two sets of issues:

- how the centers may use material that is proprietary as an input into their research;
- the extent to which they can organize joint research with private sector partners and deal with a sharing of patents, including cases where they may have to patent their own work.

Each of these deserves a nuanced discussion.

On the first, **using the proprietary materials of others**, it is likely that the centers will increasingly be using proprietary material in their research. That is inevitable given the magnitude of the private sector effort in biotechnology and the exponential growth of proprietary patents on tools and processes as well as products. In fact any probe or promoter sequence that is used in our research is likely to be patented.

The long-term solution may well be to join with others in the NARS and in the AROs to create a “public research tool kit.” This is likely to be an arduous undertaking, and we would have to see what and how we could contribute to such a common endeavor.

The immediate problem is to ensure that our current work does not put us at risk of releasing to NARS material encumbered by proprietary claims, even if our own work may be covered by the conventional “research exemption” of most patented tools.

The ISNAR report raises some concerns in that area. Thus a detailed audit and follow-up are necessary to ensure that the best practices of the few become the standard practices of all. This will need more than the efforts of the individual centers, it requires a systemwide effort. We should appoint and empower a follow-up to the audit, and fund it adequately. The center directors will appoint a designated a senior member of their management team to interact with the follow-up team.

#### PROPOSITION #6:

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*The Finance Committee should allocate off the top of the current available funds a notional sum of \$1 million for the audit and follow-up to be undertaken immediately. The report on full compliance and satisfactory procedures should be presented no later than September 1998.*

The second set of issues relates to **our work with others in the world of a proprietary science**.

Collaboration with the private sector can then take the mode of research consortia: the CIMMYT/ORSTOM apomictic gene model. We could pursue agreements ex-ante and sharing of patents for both products and process, so that the Centers could retain the patent for the South and give it for free to all the countries in the South, while the Northern partners keep the patent for the North. This is not so different from what they do themselves.

But other possibilities may arise where the Centers will need to patent and dispose of these patents in ways that prevent the profit making private sector from getting a free ride on publicly funded research that uses germplasm held in-trust. Such patents must be pursued within a clear set of principles that benefit the developing countries and the poor.

All of these are complex questions. While the principles are clear, we should be able to allow some flexibility in application to reflect the need for some divergences, but make the principles unambiguous and public. Therefore:

## PROPOSITION #7:

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*The board chairs and director generals will prepare a concise statement of the principles that govern interactions with the private sector and patenting and make it public by the end of this week, and designate an inter-center working group to issue more detailed guidelines by September 1998.*

In the implementation of this policy, we will also need specialized advice on how best to handle these issues. Centers should have access to expert legal, negotiating, and technical counsel via a central unit organized to provide, not counsel *per se*, but access to counsel. Thus one more proposition:

## PROPOSITION #8:

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*A central advisory capacity on legal matters, not a central legal counsel but one who knows where to go for the advice needed, shall be created. The Finance Committee will allocate \$250,000 for that central capacity. That capacity shall be in place by ICW98.*

### Why Biotechnology?

Given the immensity of the long-term food security and environmental conservation challenges confronting developing countries, the CGIAR has extensively debated the possible use of biotechnology in its efforts to cope with promoting sustainable agriculture for food security, and promoting poverty reduction in the face of mounting demographic pressure and limited natural resources. Issues of ethics, biosafety, and intellectual property rights have dominated the debate. A recent set of meetings held at the World Bank addressed the biosafety and ethical questions, and a draft of the report of that meeting which Wanda Collins and I are editing for publication has been distributed to all of you. That volume also includes a full reprint of the Kendall panel report on biotechnology.

The CGIAR work in this area should be done within a clear framework that governs all the activities of the centers, a framework that is in keeping with all the principles that we have long stood for, our concern for the poor, the environment, our responsible trusteeship of the germplasm collections. We have done a lot to clarify the pieces of such a framework to govern our work in biotechnology. Let me try to summarize:

- Biotechnology must be viewed as **one** of the important tools for providing food security for the poor.
- The System advocates the prudent application of the full range of biotechnology tools to achieve substantial and sustainable growth in agricultural productivity in poor countries. These tools include, but are not limited to, molecular markers, genetic engineering, and recombinant vaccines.
- The CGIAR views biotechnology as a promising means for ensuring environmental protection over the long term.
- The CGIAR has a clear comparative advantage in ensuring access by the countries of the South to the advanced tools of biotechnology. This advantage accrues by virtue of its present credible mass in biotechnology, its global network of partnerships within and among countries of the South, and its increasingly close linkages to advanced research institutions of the North, both public and private.

- Given the extremely rapid pace of new developments in biotechnology, the System is committed to increasing its partnerships with AROs, both public and private, North and South, to assure ready access by CGIAR scientists and our partners in the South to advanced technologies. In this context, I am happy to note that two proposals for enhanced partnerships are being advanced by two AROs for our consideration.
- The CGIAR will probably have to make significant investments in the arena of biotechnology in order: (1) to maintain its own credible scientific mass in this rapidly changing frontier that is becoming so critical for any breeding work; (2) to enable it to be more proactive in assisting countries of the South to establish effective biosafety regulations; and (3) to contribute substantially to developing the human capital needed to ensure the judicious application of appropriate biotechnology tools to important food security and environmental problems.
- The CGIAR is firmly committed to the application of genomics (molecular genetics, molecular markers) for the immediate use in better understanding and manipulating the genomes of plants, animals, and their pathogens and pests.
- The development and deployment of transgenics (via genetic engineering), while politically sensitive, is seen by the System to provide important options for meeting the food security and environmental challenges of the future, options that we cannot afford to exclude from our activities.
- The CGIAR firmly believes that all of its activities in the arena of biotechnology must be carried out under appropriate and approved biosafety regulatory frameworks, both within individual countries and institutions.
- The System will not enter into biotechnology partnerships with institutes that do not have such regulatory frameworks in place.

We now need a clear and public statement of this as policy. We need to link it to the other documents that have an impact on the related topics of genetic resources and collaboration with the private sector, and patenting and the ethical guidelines we have adopted. Hence:

#### PROPOSITION #9:

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*A short and clear statement on biotechnology policy, building on what we already have, shall be completed and adopted by the Centers (directors and board chairs) and made public by the end of this week. A more complete statement would be ready by September and distributed for ICW.*

These propositions, if followed on, would result in our having a much clearer and public statement of how the Centers will be interacting with the private sector for the benefit of the NARS, the poor and the environment on which we all depend. Coupled with the earlier statements on the management of genetic resources, and patenting issues, it would provide a clear position for the CGIAR on this complex set of interrelated issues.

#### Envoi

I do not expect the propositions that I have made to be adopted or rejected now, not even debated or discussed now. Rather, these are intended to be some thoughts that you will carry through the disposition of the agenda,

and at each point when we discuss one of the items that are addressed by my opening comments, I hope that the propositions I made will help focus our discussion, and give us an actionable decision to accept, amend or replace by another proposition. In that way, our discussions will lead to movement and progress if not closure on some of these complex issues.

In millions of homes around the world, men, women, and children live unfulfilled lives. They suffer in the grip of hunger and malnourishment. To help end their bondage is our calling. There are 40,000 persons who die from hunger related causes every day. So let us not waste a single day. Let us act with wise deliberation and all the speed that these enormous challenges demand. We can do no less.

**PROPOSITION #10:**

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*Representatives of FAO and the Centers will jointly identify areas requiring clarification in current agreements covering germplasm collections and will report to ICW98 on ways in which these issues will be addressed.*

(This tenth proposition was subsequently added, after the Chairman's formal opening statement.)

## Chairman's Announcements

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Ladies and Gentlemen:

I have a few announcements to make, before we adopt the agenda for MTM97.

### Membership

I am delighted to announce that President Museveni of Uganda personally informed me, when I visited his capital recently, that Uganda had decided to join the CGIAR. We agreed on the next steps to be taken, and I very much hope that an Ugandan delegation will be with us at ICW98. Uganda's membership will bring the South-North balance to 20-23, tantalizingly close to parity. I invite you to join me in a round of applause for Uganda and President Museveni.

### Agenda

The theme of this year's MTM is "Mobilizing Science for Global Food Security." Agenda items are expected to help us clarify our thoughts on this goal, and enable us to take concrete action towards its realization. As at other recent CGIAR meetings, parallel sessions have been arranged for the consideration of some items.

The proposed research agenda and modified MTPs will be the basis of how science is mobilized at the Centers in the immediate future. Reports from two expert panels will provide us with guidance on the extent of biotechnology research we should undertake, and on the issues connected with intellectual property we will need to address in responding to the biotechnology challenge.

The external reviews will demonstrate how well scientific excellence is already being nurtured and deployed. The work of the partnership committees should indicate the continued effectiveness of a partnership mode. Recommendations from the *Global Forum for Agricultural Research* will provide us with an opportunity for further broadening and strengthening partnerships. The overarching agenda item, giving cohesion and strength to the rest of the agenda, is the system review. Once again, I thank Maurice Strong and his colleagues for being with us, and I anticipate a highly productive interaction with them.

### Public Awareness

You will be pleased to know that the public awareness campaign for agriculture planned by center directors with your blessings is now up and running. It has a leader, Barbara Rose, formerly of IFPRI; a home, at the CGIAR Secretariat; and a distinguishing name, "Future Harvest." Clearly, the system's renewed public awareness campaign is vigorous and in reliable hands.

Some of you would have learned more about the progress and future of this campaign, at this morning's breakfast briefing sponsored by our colleagues from Japan. For the benefit of those who missed that briefing, let me mention two developments. As you might recall, an important strategy of the campaign is to recruit a number of high level ambassadors, following the UNICEF model. This is being done, with great success. Another aspect of the strategy you approved, is for several studies to be commissioned, so that the links between agriculture and various aspects of human experience could be determined. The first of these studies, on the connections between agriculture and peace and conflict, is now underway. It is being conducted by Norway's International Peace Research Institute. Others are planned. More details will be shared with you, as these become available.

### Comings and Goings

There is always a time at these meetings when we welcome new colleagues and friends, in the confident expectation that they will leave as strong an imprint on the work of the CGIAR as their predecessors to whom we have said or will say farewell. Let me start with the cosponsors.

*CO-SPONSOR GROUP*

**Jorge E. Illueca** is now the new CGIAR representative from UNEP, succeeding **Franklin Cardy** who has moved to the World Bank. Mr. Illueca is UNEP's Managing Director and Assistant Director, Programs.

*THE CENTERS*

Turning to the Centers, let me start with Board Chairs.

*Board Chairs*

**David R. MacKenzie** has succeeded **Martha ter Kuile** as the new chair of *CIP*.

**Ragnhild Sohlberg** is the new chair of *ICRISAT*. She succeeds **R. S. Paroda**.

**Marcio de Miranda Santos** has succeeded **Wanda Collins** as the new chair at *IPGRI*.

*TAC*

Five new members joined TAC at the beginning of this year. They are **Michael Cernea**, **Alain de Janvry**, **Maria Antonia Fernandez Martinez**, **Elias Fereres**, and **Usha Barwale Zehr**. They replaced **Ted Henzell**, **C. H. Hanumantha Rao**, **Sir Ralph Riley**, **Peter Magnus A. Tigerstedt**, and **Maria José Zimmermann** whose terms have ended.

*IAEG*

The **Impact Assessment Evaluation Group** has been strengthened by the addition of two new members: **Cristina C. David** and **Frans L. Leeuw**.

**Honors**

International recognition of the scientific achievements of center staff is an important validation of our mission and our programs. It is, as well, cause for personal satisfaction among the men and women who work wholeheartedly, year in, year out, to mobilize the best of science to help the poor and hungry. I am delighted, therefore, to announce the following honors received by our center colleagues. The announcements are in alphabetical order:

**Norman Borlaug** was honored with the Humanitarian of the Year award in Canada.

*CIP* has received the Global Potato Congress 1997 Award, the International Potato Award presented by France, the Special Regional Award for the Quinoa Project, and the La Paz Scientific Merit Award.

**C. L. L. Gowda** of *ICRISAT* received the Vietnamese Medal of Agriculture and Rural Development "for distinguished contributions to groundnut development in Vietnam."

**Gurdev S. Khush**, Head and Principal Plant Breeder Plant Breeding, Genetics and Biotechnology Division at IRRI was appointed Honorary Visiting Research Professor of the Norman Borlaug Institute for Plant Science Research, De Montfort University, England.

**R. S. Paroda**, the former chair and currently vice chairman of *ICRISAT*'s board, and Director General of the Indian Council of Agricultural Research (ICAR), was awarded India's prestigious Padma Bhushan, for "distinguished and excellent service" in the field of Science and Engineering, specifically plant breeding.

**Per Pinstrup-Andersen**, Director General of IFPRI received the Charles A. Black Award presented annually by the Iowa-based Council for Agricultural Science and Technology (CAST). The award is given to a food or agricultural

research scientist who has made significant scientific contributions in his or her field and communicates the importance of this work to the public, policymakers, and news media.

**Roelof Rabbinge** is the recipient of his country's highest award, Knight Order of the Dutch Lion.

**Tim Reeves** received an award from PCARRD for his successful efforts to forge linkages among CIMMYT's research partners.

**Dharmawansa Senadhira**, Plant Breeder and Program Leader of Flood-Prone Rice Ecosystem research at IRRI, was chosen as one of the three laureates of the Fukui International Koshihikari Rice Prize for his contribution to improvements in rice production through plant breeding.

**Virendra Pal Singh**, an IRRI agronomist, was given a Plaque of Appreciation by the Rice Research and Development Workers of Eastern India, in recognition of his initiative and support to rice research and development in the region.

Let us honor all these women and men who have given their best to the CGIAR and continue to do so. Please indicate your support with a round of applause.

We can now take up the next item of business, which is adoption of the MTM98 agenda.

## *Review of the CGIAR System*

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**M**aurice Strong, chair of the distinguished System Review Panel, presented the preliminary findings on the CGIAR's science and strategy, governance, structure, and finance. How the CGIAR System functions, the research agenda supported by the Group and implemented by the Centers, and numerous connected questions will receive common focus in the Panel's forthcoming report.

Mr. Strong stated that he is privileged to be entrusted with the responsibility of reviewing the CGIAR. He stressed that although the presentation at MTM98 reflects a synthesis of the panel's ideas and opinions, and draws on their extensive experience, it does not represent final recommendations. Mr. Strong encouraged responses to the presentation, which will help shape the final report.

According to Mr. Strong, the CGIAR is an extraordinary resource to help improve the lives of the poor and hungry in developing countries. He called the CGIAR "the best single investment for Overseas Development Assistance, bar none." The \$5.2 billion expended between 1972 and 1997 on the CGIAR has been accountable for virtually doubling food production in developing countries. Industrial countries have also benefited from investing in the CGIAR — studies for the United States and Australia show high returns.

The challenge for the twenty-first century is to ensure accessible and affordable food supplies for the world's poorest. Mr. Strong called on the CGIAR to mobilize political will to promote food security in developing countries. The CGIAR was never more needed, he emphasized, but it faces risks from apathy and shifting priorities. The funding issue is real and could be a threat to the future viability of the CGIAR if sustainable financial support systems are not established.

He called on the Group to consider the annual meeting of members of the World Economic Forum, held at Davos, Switzerland, as an opportunity to reach a large audience of leaders from business, government, academia, nongovernmental organizations, and the media. The Forum has launched a new initiative, "Trustees 21," which will unite more than a thousand decisionmakers in an effort to develop new insights, organizations, and structures to improve the state of the world in the twenty-first century. The next meeting of the World Economic Forum will be from January 28 until February 2, 1999.

Mr. Strong noted that the CGIAR system is a great asset, but its work remains relatively unknown. He welcomed the launch of the Future Harvest campaign as a good step to increasing public awareness about the importance of international agricultural research.

The System Review Executive Secretary emphasized that the CGIAR's greatest and unique assets are its genetic collections, scientific capability, and partnerships. The CGIAR partnerships with national agricultural research systems, advanced research institutions, and nongovernmental organizations are both effective and efficient. These partnerships are a model for other sectors, such as health.

CGIAR scientists are at the forefront of a global research effort. The diversity, location, global coverage of its 16 centers and research partners are at the heart of the research system. Agriculture affects the entire planetary ecosystem. Therefore, sustainable agriculture has to be at the forefront of the concern, commitment, research, and policies of all countries in the twenty-first century. The CGIAR has to build on its accomplishments. It should play a larger and more important role in the coming decades.

The Specialist Panel on Science and Strategy acknowledged that the CGIAR's science is its comparative advantage, addressing the needs of the poor who would otherwise not receive assistance. The Panel emphasized linking scientific concepts to farmers' needs. The CGIAR should stress natural resources management, integrated gene management, knowledge management, and people-centered approaches.

The Specialist Panel on Governance, Structure, and Finance presented the results of recent meetings in Mexico and Italy. The Panel commented on the CGIAR's governance. The Panel felt that the CGIAR may need more focused programs, a culture that fosters innovation and risk-taking, conflict resolution techniques, the

ability to adapt to external change, and non-bureaucratic governance. Among the goals of the CGIAR should be attracting and keeping the best scientists, higher visibility with key audiences, publicizing international agricultural research, and reallocating resources from old to new priorities.

In developing its long-term vision and strategic perspective, the System Review suggested that the CGIAR should consider the following points:

- Research Strategy for the Twenty-first Century — The CGIAR should focus on a 10-15 year strategic perspective.
- Multidimensional Approach — The CGIAR should develop a thematic focus on genetic technologies and natural resource management systems, as well as a regional focus on Sub-Saharan Africa, Southeast Asia, and other regions at risk.
- Holistic Strategy — The CGIAR should link integrated gene management and natural resources management to contextual changes and new partnerships.
- Essential Partnerships — The CGIAR should use a strategic, applied research focus on upstream and downstream partnerships, focusing on needs and what is realistically possible.
- Magic Bullet — There is no magic bullet for the global poverty and food security challenges of the twenty-first century. The CGIAR strategy must be clearly and consistently applied. There should be consolidation at the system and Center levels.
- Science and Technology Revolution — This requires rapid adaptation and changes. What are the CGIAR's comparative advantages? What more should the CGIAR do? What should it do differently?
- Global Research System — The CGIAR could develop a functioning global knowledge system that incorporates each key component, mechanism, and fora for interaction.
- CGIAR Challenge — The revitalized CGIAR that emerges from the System Review should emphasize sound strategy, efficiency, good governance, and sufficient funding. A critical point is the CGIAR's unique membership of all actors in research and development.

During MTM98, members of the Review panel had both formal and informal meetings with a wide spectrum of CGIAR stakeholders. These included, among others, the following: the Oversight, Finance, NGO, Private Sector, and Public Awareness and Resource Committees; the Global Forum and NARS Steering Committees; Regional Representatives; the Review Panel of the Systemwide Genetic Resources Program; the Center Directors' Committee; the Committee of Board Chairs; and the Cosponsors.

## Plenary Discussion

The Oversight Committee welcomed the System Review's presentation. It encouraged panel members to be forward looking and strategic. It also encouraged members to emphasize how the CGIAR can enhance efficiency, improve impact, and increase its influence on policies and development. Committee members felt that the MTM98 presentation was informative about scientific and genetic resources issues, but could be stronger on the people and poverty dimension of the CGIAR's work, natural resources management, partnerships, and support to national agricultural research systems.

The Group discussed the importance of the mission statement as a banner by which the CGIAR will be judged. Thus, it should convey the CGIAR's shared vision. There should be less emphasis on process and more on purpose and impact. They also called for including a clear vision of how the CGIAR and Centers should be positioned in the regional and global systems. The members noted that the System review has proposed increases

in the CGIAR's work. If funding continues at current levels, and the CGIAR wants to do more and be more influential, the question is which areas can or should be eliminated in the future.

The NGO Committee applauded the System Review Panel's consultative approach, which obtained a range of viewpoints, and stated its appreciation for efforts to define a new mission statement. The NGO Committee recommended that in defining the twin pillars of integrated gene management and natural resources management, there should be more emphasis on reducing poverty and ensuring food security, plus targeting marginal, degraded, and other ecosystems where the poor concentrate. The NGO Committee also called for fully developed alternative scenarios of the System's future, which members and partners could discuss.

Throughout MTM98, the Group interacted extensively with the System Review Panel during plenary, committee, and consultation sessions. The Group welcomed the interaction with the System Review Panel and encouraged panel members to provide a final report focusing on strategic issues and recommendations. The System Review Panel will present its final report at ICW98.

## *Climate Change: Major Science and Policy Questions*

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**R**obert Watson, Chairman of the Intergovernmental Panel on Climate Change (IPCC) and Director of the World Bank's Environment Department, presented an overview of the latest scientific findings on climate change, the projections of climate models, and climate change's significance for forestry and agriculture.

Among the IPCC's key findings is that observed changes in the earth's climate are consistent with human-induced emissions into the atmosphere.

When they are released into the atmosphere, carbon dioxide, methane, and nitrous oxide are the primary contributors to the enhanced greenhouse effect. The bulk of their emissions, particularly that of carbon dioxide, is related to energy processes. Agriculture accounts for 20 percent of the annual increase in greenhouse gases.

Today, atmospheric concentrations of all greenhouse gases are higher than at any time in the past 160,000 years. The question is not whether the earth's climate will change in response to human activities, but where (regional patterns), when (the rate of change), and by how much (magnitude).

Mr. Watson explained how agricultural systems are vulnerable to climate change. Although global agricultural production could be maintained, there could be significant regional effects, with reduced production in the tropics and subtropics. Climate change experts predict increased risk of hunger and famine in Sub-Saharan Africa, South, East and Southeast Asia, and the tropical areas of Latin America as well as some Pacific Island nations. The incremental costs of adaptation could burden developing countries. Analysts are uncertain about developing countries' capacity to adapt in the face of projected population growth.

The ultimate goal of the U.N. Framework Convention on Climate Change is to stabilize emissions of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous interference with the earth's climate system. Such a level should be achieved within a time frame sufficient to allow ecosystems to adapt naturally to climate change, ensure that food production is not threatened, and enable economic development to proceed in a sustainable manner. Without global climate policies to mitigate greenhouse gas emissions,

analysts project that the earth's temperature will increase by between 1.5 to 6.5 degrees Fahrenheit by 210 — a rate faster than anything observed during the last 10,000 years. Because of the long lifetime of greenhouse gases in the atmosphere and the large thermal inertia of the oceans, greenhouse gas induced global warming can only be reversed very slowly.

A number of mitigation options exist for agriculture and forestry. Substantial amounts of carbon can be sequestered or conserved in the forestry sector over the next 50 years by slowing deforestation and establishing tree plantations. Agricultural practices that can reduce greenhouse gases include the following:

- altered management of agricultural soils and rangelands;
- improved efficiency of fertilizer use;
- restoration of degraded agricultural lands and rangelands;
- methane recovery from storage of manure.

Mr. Watson invited and encouraged CGIAR scientists to work in partnership with the IPCC on these issues.

Following Mr. Watson's presentation, Louise Fresco, Director of the Sustainable Development Department at FAO, presented a scientific analysis of the potential risks and opportunities from climate change, and the implications for the CGIAR.

Risks from climate change are due to uncertainty about the interactions among climate, agriculture, and population, and the ability for adaptation. Opportunities from climate change include carbon dioxide fertilization, longer growing seasons, and more efficient water use.

Potential contributions from agricultural research include the following:

1. Adaptation — using available information to help farmers make decisions and improving agriculture's resilience to change and variability.
2. Mitigation — reducing greenhouse gas emissions from agriculture, storing carbon soil and biomass, and raising alternative energy crops.

Ms. Fresco recommended the following:

- thinking through a comprehensive strategy on climate change that acknowledges the importance of variability and change and exploits the opportunities;
- fostering research on climate risk avoidance and prevention, adaptation, and mitigation;
- developing partnerships between the United Nations, CGIAR, GCTE/IGBP, and governments.

Don Winkelmann, TAC Chair, commented on the climate change presentations, underlining the potential effects of climate change on agriculture, especially in developing countries, and the potential for agriculture to contribute to mitigation and adaptation strategies. Alison Withey, now working with the U.S. Agency for International Development (USAID), is currently assessing the CGIAR's influence on greenhouse gas issues and will present a final report to TAC. At its September 1998 meeting, TAC plans to review the implications of issues related to climate change for CGIAR priorities.

## *Biotechnology and the CGIAR*

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**A**t MTM98, the Group continued its discussion of how the CGIAR will increase the use of biotechnology to carry out its mission. Through combined efforts and goodwill, the Group reached closure on a phase of consultation and policy formulation about biotechnology that began at a stakeholders meeting in April, 1997. That meeting was convened against the background of an emerging view, particularly among developing country scientists, that agrobiotechnology, with adequate safeguards, could be an important, additional tool in the world's continuing efforts to eliminate poverty and hunger, while protecting the environment. Stakeholders reviewed the state-of-the-art both within and outside the CGIAR System. They discussed the needs and opportunities for CGIAR programs and investment in biotechnology research. From that beginning, the Group intensively examined the substance of the issues and, finally, agreed at MTM98 on a number of action-oriented propositions.

The Group agreed on the potential importance of biotechnology as an instrument to help the poor and the environment, but rejected the notion that it is some kind of magic bullet. Whatever the CGIAR undertakes will be within the ambit of agreed-upon ethical principles, and with necessary precautions to ensure safety. Up to now, this promising aspect of agricultural science has been very much a part of the commercialization of science. Henceforth, the mobilization of its potential for public good-related research will be enhanced. The Group clarified the CGIAR's stand and the CGIAR Centers' current practice on genetic resource management, collaboration with the private sector, patenting and other important issues. The MTM98 deliberations and decisions reaffirmed the scientific credibility of the System.

The CGIAR's future actions will have to be elaborated in alliance with many partners. Since MTM98, the World Bank has already brought together a number of partners in an important workshop on "Intellectual Property Rights in Agriculture." It is noteworthy that during the course of the workshop participants from two national systems, Embrapa (Brazil) and ICAR (India), declared their strong interest in carrying out analyses of strategic issues concerning technology innovation, including IPR in the development of agriculture.

These and related issues will be discussed on numerous platforms, for instance at meetings of the Conference of Parties of the Convention on Biological Diversity, and the World Trade Organization. The CGIAR must ensure that its voice and views, on behalf of the poor and the environment, are heard in the multiplicity of fora where discussions are shaping the basis of a new global regime.

The Group received reports from the Panel on General Issues in Biotechnology and the Panel on Proprietary Science and Technology, which were commissioned to review complex biotechnology and intellectual property rights issues, under the auspices of TAC. The participants in parallel and plenary sessions discussed the Panel reports, which derived from consultations with stakeholders and CGIAR committees.

### **Report of the Panel on General Issues in Biotechnology**

Chairman Richard Flavell presented the report of the Panel on General Issues in Biotechnology. The Panel considered ways in which the CGIAR might advance its mission through greater use of biotechnology. With earlier reservations about the potential benefits of biotechnology subsiding, the CGIAR must take appropriate action to ensure that it is not left behind as new approaches rapidly become possible. At the same time, it must not lose sight of the overriding need to retain an appropriate balance in its activities.

The Panel concluded that there are widespread opportunities to involve the world scientific community in the application of biotechnology to the needs of developing countries. The CGIAR is in a strong position to act as

a catalyst to foster these contributions, while progressively strengthening its use of biotechnology as a tool to further its goals and mission.

The panel recommended the following:

#### FOR THE CGIAR

- to establish a basic policy framework on biosafety and gene deployment so that mechanisms are always in place to ensure that the benefits and risks associated with the release of transgenic organisms are assessed;
- to develop a new strategy to align the CGIAR system with others committed to a greater understanding of germplasm; foster the evolution of international networks for biotechnological research directly associated with the CGIAR mission; and ensure that Centers have the capacity to apply their knowledge to the needs of client countries;
- to help bring about a “genome summit” to assure global collaboration among representatives of multinational companies, major funding agencies, charitable institutions, and other organizations;
- to expand international networks for biotechnological research in agriculture, fisheries, and forestry;
- to create a central biological service unit to provide professional advice to the Centers on the proprietary, biosafety, and gene deployment considerations of their projects.

#### FOR THE CENTERS

- to review in-house expertise in genomics and bioinformatics, and in-house capacity to assess biotechnology’s potential contributions to their research;
- to use “duty of care” committees to assess risks, consult clients, and adhere to regulatory procedures for biotechnology.

### Report of the Panel on Proprietary Science and Technology

Chairman Tim Roberts presented the report of the Panel on Proprietary Science and Technology, which reflects a range of expertise and viewpoints. Because of this diversity, there was a broad spectrum of opinions on what was likely to promote the mission of the CGIAR and what forms of intellectual property are legitimate.

The panel conducted brief surveys on the following points:

- To what extent are CGIAR mandated crops already affected by proprietary claims?
- Will owners of proprietary agricultural biotechnology (private companies and universities) make their proprietary science available?
- What are Centers already doing regarding proprietary science?

Seven Centers responded to the survey on the use of proprietary science, which ISNAR conducted. The survey showed that in many cases the Centers are using proprietary biotechnology without knowing whether the results of their research can be applied freely. The Panel expressed concern that the Centers need access to skilled professional advice on intellectual property and related matters.

The survey of owners of intellectual property showed that the CGIAR cannot hope to acquire rights to technology for use on behalf of the poor if the resulting products then compete in commercial markets, forcing prices down. Owners said that in principle they would make intellectual property available to help the poor, but only if it did not damage them technically or financially.

Finally, on the question of what the CGIAR should do on intellectual property, the Panel concluded that the proprietary science should be protected only if it furthers the mission of the CGIAR and the results are accessible to the poor.

Although there was no consensus on the implications of the survey findings, the panel made the following recommendations:

- In dealing with propriety science, the CGIAR must be guided by its mission. The CGIAR should never undertake research to generate cash to support CGIAR work or bargaining chips for acquiring rights to technology from others.
- The CGIAR must promptly acquire relevant expertise to deal with technology transfer, intellectual property, and alternative rights regimes. At a minimum, it should set up a central office to deal with such matters and conduct an immediate review of current proprietary science used by the Centers.
- The Centers' existing *Guiding Principles on Intellectual Property Rights and Genetic Resources* should be revised, formalized, and enforced. The CGIAR should make decisions regarding intellectual property protection based on clear, mission-based rules.

### TAC Commentary on the Panels' Reports

Chairman Donald Winkelmann presented the TAC commentary on the expert panels' reports.

TAC endorsed most of the recommendations of the Panel on General Issues in Biotechnology, including the following: an emphasis on the CGIAR's overarching goals, biosafety, biotechnology, and harmonization of center germplasm responsibilities with international agreements; a policy framework that covers germplasm, vaccines, pest management, and natural resources management; assurances that Centers have sufficient biotechnology capacity to improve germplasm and that biotechnology and other breeding technologies are balanced; an evolutionary process toward biotechnology rather than a massive shift; and the development of networks of practitioners to add breadth and depth to resources committed to the CGIAR portfolio.

The TAC Chair emphasized three policy themes:

1. Investments in biotechnology should favor strategic applications of basic science to the species and problems important to the tropics and sub-tropics.
2. Outsourcing a portion of the genomics work can produce notable efficiencies.
3. Judicious use of a central unit can improve efficiency and reduce Centers' legal, negotiating, and other costs of protecting access to intellectual property.

TAC recognized that the report of the Panel on Proprietary Science and Technology represented a diversity of views and contributed to greater understanding of the intellectual property rights issues confronting the CGIAR. TAC was largely in accord with the Panel's findings and strongly endorsed the view that all research should be pursued for its potential direct contribution to CGIAR goals. Only in some cases will protecting intellectual property favor the System's goals, the TAC report said, noting that it is easy to overestimate the potential income returns to intellectual property. Regarding situations in which publishing does not offer adequate protection for intellectual property that emerges from CGIAR work, TAC joined the Panel in favoring protection in three situations: access, partnerships, and technology transfer. TAC supported the Panel's sense of urgency about an expert review aimed at normalizing Center use of others' intellectual property. TAC also endorsed the ethical guidelines the Centers use.

TAC amplified two of the Panel's recommendations:

1. An independent entity should distribute any revenues earned from Center-developed intellectual property to assure appropriate benefit-sharing.
2. Centers are responsible for decisions about intellectual property protection. This will require a centralized service to support Center decisionmaking to assure that decisions are transparent and information is readily accessible.

TAC supported the ongoing discussion of MTAs and urged members to give consideration to how the CGIAR will access the intellectual property of others in the future and how the CGIAR should handle situations in which protection will not apply or be enforced.

TAC praised the Panels for integrating the common apprehensions about biotechnology — consumer safety, implications for biodiversity, obligations under international agreements, and agreements with partners — into their reports and giving ample attention to the CGIAR’s special concern for the efficient use of its resources to serve the poor.

## Plenary Discussion

Sam Dryden spoke on behalf of the Private Sector Committee (PSC), which endorsed the report of the Panel on General Issues in Biotechnology, but had difficulty with the Proprietary Science and Technology Panel’s report. Overall, the PSC believes that the private sector is prepared to collaborate and join into partnerships on biotechnology projects as long as the rules and boundaries are clear and understandable. One of the most important elements is a clear title, an issue which merits more discussions by the CGIAR. A second key issue is adequate biosafety and “duty of care” processes. The PSC supported the establishment of “duty of care” committees at Centers and called for a central, but integrated, legal and strategic capability to assist centers.

Miguel Altieri spoke on behalf of the Non-Governmental Organizations Committee. The NGO Committee endorsed the general conclusion that the CGIAR’s mission should guide Centers’ biotechnology work, which means that the needs and circumstances of poor farmers would determine the agenda. The CGIAR should have systemwide biosafety and bioethical standards that capture the wider environmental and social impacts. When appropriate, Centers should follow both country-level and international biosafety standards. Regarding intellectual property rights, NGO Committee members reiterated their concern for the rights of indigenous and poor farmers. They urged the CGIAR to take a more active role in defining the future of intellectual property rights and to become a political voice in multilateral fora.

Geoff Hawtin summarized the responses of the Genetic Resource Policy Committee (GRPC), as well as the Center Directors Committee (CDC).

The Genetic Resources Policy Committee agreed with the TAC Panels and felt strongly that the CGIAR should support and contribute to the convening of a genome summit or conference. The conference should help focus more international attention on under-utilized species, including forest, fish, and animal species relevant to food and agriculture. The GRPC endorsed a central service facility supporting the needs of individual centers and noted that many centers already have “duty of care” committees.

The GRPC reiterated its strong support for the CGIAR-FAO agreements and welcomed the assistance of other organizations to monitor compliance. The Committee also endorsed a statement outlining steps centers should take in cases where MTA violations may have occurred. The CGIAR could pursue the issue of designated germplasm with the World Trade Organization in the context of the review of the TRIPS agreement next year.

The Group then discussed the ethical principles, which provide high ethical standards for general research under four overarching themes: equity, trusteeship, responsible science, and social benefits. Centers are expected to adopt codes of conduct based on the principles.

Hawtin also reported the comments of the Center Directors Committee. IPGRI and FAO are discussing the need for clearer guidelines on germplasm designation, including a clear interpretation of “germplasm,” “related information,” and “unrestricted access.” One issue is how centers should respond to requests for very large samples and how they might recover part or all of the costs of fulfilling those requests. The CDC supported harmonization of MTAs to assure a common standard across the system and is looking into alternative agreements. The CDC also endorsed the guidelines for dealing with MTA violations.

The CDC called for clarification and expansion of intellectual property rights guidelines in three areas:

- the degree of genetic change necessary to claim intellectual property rights for derivatives;
- benefit sharing arrangements;
- how to handle any revenues generated as a result.

On biotechnology, the CDC welcomed the initiatives announced by Cornell University and Agropolis Montpellier. The CDC also supported a service facility that can act as a clearinghouse mechanism on legal and contractual matters and provide advice and expertise to Centers.

### **Parallel Session I: General Issues in Biotechnology**

R. S. Paroda chaired the parallel session on General Issues in Biotechnology. The participants reached a broad agreement that the CGIAR should consider the application of molecular genetics, not only in germplasm enhancement, but also in natural resources management, diagnostics, vaccine development, and other fields.

The parallel session supported panel recommendations to expand network approaches to biotechnology research. Partnerships with both public and private sector organizations are essential for the CGIAR to realize both the potential and the benefits of biotechnology. These partnerships should also include building sophisticated bioinformatics for genome research.

Regarding the need to establish a policy framework on biosafety and gene deployment, the CGIAR should support the development of an international biosafety protocol under the Convention on Biological Diversity and not duplicate the effort.

The participants fully supported “duty of care” committees at Centers, a central biotechnology unit to provide professional advice not only on proprietary but also on biosafety and gene deployment issues, a genome summit in which the CGIAR should play a facilitator’s role, and a CGIAR policy statement on biotechnology.

### **Parallel Sessions II: Proprietary Science and Technology**

Chaired by Carl-Gustaf Thornström, the parallel session on Proprietary Science and Technology recognized that protection of intellectual property is inescapable for the CGIAR and supported the Chairman’s propositions regarding intellectual property. They recommended that the Centers should collectively refine their various intellectual property policies into a coherent package, which the Centers would submit for endorsement at ICW98 following consultation with TAC. This coherent policy would allow the CGIAR to take an active and unambiguous stand on behalf of the system in various international fora.

Key elements to be included in the integrated CGIAR intellectual property policy are the following: common germplasm acquisition and MTAs, intellectual property rights guidelines, ethical principles, guidelines on designated materials, and the agreement with FAO.

Participants supported creating a central biotechnology service unit to facilitate Centers’ access to legal counsel. IPGRI was suggested as a possible site for the unit.

The participants also recommended a comprehensive intellectual property audit to clear titles and eliminate potential risks to centers and their partners, noting that the US \$1 million figure quoted by the Chair is only notional.

## Plenary Discussion

The Group received the reports of the parallel sessions and discussed various topics including the need to:

- harmonize many of the existing policies among the Centers and make them public;
- conduct a full audit on proprietary sciences in the Centers to ensure appropriate actions and follow-up;
- take adequate first steps to set up a central advisory capacity on legal matters related to proprietary sciences; and
- issue a short and clear statement on biotechnology policy that would build on previous CGIAR statements and could be finalized at International Centers Week 1998.

Discussions on the Centers' policies and procedures relating to genetic resources, biotechnology, and intellectual property rights precipitated a dialogue on the relative roles of the CGIAR and the Centers. From the dialogue came clarification of the roles of CGIAR members and the Centers in policymaking: The Group provides guidelines that help to shape the policies and programs that the Centers implement. Consensus within the Group on an issue or set of issues does not preempt policymaking by, or dictate policies to, sovereign governments represented around the table. The Centers, the only juridical bodies in the system, adopt and implement the Group's guidelines.

The Group supported the propositions of the Chairman and:

- agreed that a central advisory capacity should be developed on biotechnology and legal issues;
- adopted a set of ethical principles relating to genetic resources. The ethical principles are included in the set of guiding principles and procedures for CGIAR Centers to follow when dealing with biotechnology, intellectual property rights, and genetic resource issues.
- agreed that the Centers will conduct a material transfer agreement and intellectual property rights audit to determine that Centers are in full compliance and follow satisfactory procedures;
- agreed that the Centers should jointly review with FAO current trust agreements covering germplasm collections and made recommendations about areas needing clarification;
- agreed that the Centers' policies and practices in biotechnology, genetic resources, and Intellectual Property Rights will be made public.
- agreed that the CGIAR should be instrumental in helping convene a genome conference.

The Group also received a set of guiding principles and procedures for CGIAR Centers to follow when dealing with biotechnology, intellectual property rights, and genetic resources issues. Developed by the Board Chairs and Center Directors in response to the request of the Chairman in his opening statement, the package includes the following:

- Ethical Principles Relating to Genetic Resources (endorsed at MTM98);
- agreements between Centers and FAO placing collections of plant germplasm under the auspices of FAO;

- germplasm acquisition agreement for material intended for designation;
- Material Transfer Agreements for Designated Germplasm (available in two formats: one in contract form and the other using the “software” protection approach);
- statement on the steps Centers will take when they believe that a MTA may have been violated;
- guiding principles on intellectual property rights and genetic resources;
- statement on principles involving Center interaction with the private sector and others on proprietary technology; and
- Centers’ position statement on biotechnology.

In addition to agreeing to consolidate and disseminate the package of materials, the Group endorsed these other actions:

- Reviewing and updating the above package of documents, which will involve clarifying and elaborating on these current practices at the Centers. The final text should be distributed for review at ICW98.
- Completing an audit of current practices in the area of proprietary science and arranging for the development of advisory services.
- Clarifying the existing FAO-Centers trust agreements, to be agreed on by representatives of both parties. These agreements will set down appropriate definitions and details, which will serve as a binding set of principles for the use of CGIAR-held germplasm accessions.

The Group noted that the foregoing actions do not preclude the CGIAR’s ability to adapt to new events, including recommendations by the System Review Panel, new national laws, or international statutes.

## Highlights from the MTM98 discussion of roles and responsibilities

- The CGIAR is a consultative body, like other consultative groups convened by the World Bank, to address specific themes or the development needs of individual countries.
- The Centers are the principal instruments in which CGIAR members invest, and through which they can affect the lives of their intended beneficiaries in developing countries.
- Consultation among members of the Group or with affiliated institutions or bodies — the Centers, TAC, partnership committees, and ad hoc expert panels — leads to forming a collective Group opinion or decision, such as endorsement or rejection of a concrete proposal.
- Collective Group decisions serve to guide the actions of the members and the Centers. This guidance is legally non-binding to both groups, because the CGIAR has no juridical status, but it has the moral force of commitment and a common purpose. The Group's opinions do not preempt policymaking on the same issues considered at CGIAR meetings by sovereign governments or other institutions whose representatives form the CGIAR.
- The Centers are autonomous and are free, by and large, to adopt and implement policies they consider appropriate to the fulfillment of their mandates. However, the Group's opinions should significantly influence the Centers. The Group-Centers dynamic — intellectual, professional, philosophical — fosters congruence between the approach of individual centers and policy guidelines formulated by the Group. It is significant that Centers depend on members for practically all of their financing.
- The focus of CGIAR opinions is mostly, but not exclusively, on matters that affect the CGIAR as a whole — the research agenda and its components, funding for research, group governance, and external relations.
- Periodically the Group expresses opinions about individual centers; for instance, when the Group comments on the reports of external panels that have reviewed a center and major questions of mandate.
- The Centers sometimes collectively decide to harmonize their policy in areas across the system, e.g., on genetic resources or information technology. The result is considered inter-center policy and is binding for the Centers, because it has been approved by each center. If the Group endorses such a policy, the policy becomes a systemwide CGIAR policy. Although endorsement by the Group gives a policy weight, it does not imply that member government and institutions are formally committing to that policy.

# *1997 Financial Outcome and 1998 Progress Report*

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## **Overview**

The Group reviewed the system's financial outcome for 1997, the progress toward meeting the approved financing plan for 1998, the funding requirements of the 1999 research agenda, and the investment level recommended for the 1999–2001 medium-term planning period.

## **1997 Financial Outcome and 1998 Progress**

Finance Committee Chairman Michel Petit reported to the Group on the 1997 Financial Outcome and 1998 prospects, which show the overall stability of CGIAR funding. Agenda support in 1997 was \$320 million, an increase over the 1996 level of \$304 million, indicating that in the aggregate CGIAR funding is healthy. Including non-agenda support of \$14 million, total funding amounted to \$334 million, compared with \$332 million in 1996.

The agenda outcome was about 2 percent lower than the 1997 financing plan of \$325 million, which was established at ICW96. The modest reduction primarily resulted from adverse exchange rates and slower than expected implementation of some project activities, which led to lower payments from institutional members. Most centers were on target, but two showed significant variation from the financing plan: ICRAF, +\$5 million and ILRI, −\$4 million. These outcomes were consistent with these Centers' predictions at the start of 1997.

Disbursements of funds were slower in 1997 than in 1996. By mid-year, only 39 percent of the funds had been disbursed. By the third quarter the problems worsened, 46 percent versus 65 percent in the preceding year, before a slight recovery at the end of 1997. The slippage in disbursements caused serious financial management problems for Centers as they were forced to draw on invested reserves to meet their cash requirements, resulting in reduced center income. The Finance Committee urged members to make every effort to accelerate disbursements.

Agenda support was \$320 million in 1997, compared with \$235 million in 1993, an \$85 million increase. Overall funding at \$333 million compares with \$311 million in 1993, an annual growth rate of nearly 2 percent. The integration of agenda and non-agenda funding, facilitating a unified CGIAR program approach, is almost complete.

The proportions of unrestricted funding, including funds requiring attribution, is declining, although the absolute amounts are stable. Financial data for 1994–97 show the following trends in the composition of CGIAR funding:

- Absolute levels of unrestricted and lightly restricted funding are stable;
- Restricted funding is rising as a proportion of the agenda — 36 percent in 1997 versus 23 percent in 1994–95.
- Unrestricted funding at some of the larger Centers has significantly contracted (\$3 million reductions from 1994 levels at CIAT, CIMMYT, and IITA), but this is offset by significant increases at the smaller centers (\$2 million increase at CIFOR, ICLARM, ICRAF, IFPRI, and IPGRI.)

## 1998 Progress Report

The outlook for 1998 continues to be stable. The 1998 funding forecast by Centers totals \$335–340 million, about 2 percent below the financing plan of \$345 million. The lower estimate reflects a \$5 million drop in Japan's contribution caused by adverse exchange rates and a 4 percent reduction in yen terms. Higher than expected contributions by Sweden and Norway (50 percent) helped offset these reductions. The effect of lower contribution from Japan was most evident for IRRI and IITA; the estimates of both centers were about \$2 million below the financing plan.

Regarding the allocation of 1998 World Bank funds, the Committee had made the following recommendations at ICW97:

- \$33 million to Centers on a matching basis in the ratio of 11% of funds from members other than the World Bank.
- \$5.5 million to ILRI and ICRISAT as special assistance.
- \$2.5 million for the System Review and partnership activities (including the Global Forum, and the NGO, Private Sector, and Genetic Resources Policy Committees) will be spent as planned.
- \$4 million set-aside, and to be allocated as follows:

Special assistance for ICARDA: \$1.6 million.

Start-up funding for the new CGIAR program in Central Asia and the Caucasus: \$2 million. This includes \$1 million for a facilitating structure and \$1 million for programs.

CGIAR biotechnology and genetic resources decisions: \$1.5 million. This includes \$0.5 million start-up funds for a legal advisory unit on intellectual property and \$1 million (from the CGIAR reserve) for the harmonization process to streamline the Centers' MTAs and related procedures.

## *CGIAR Research Agenda, 1999 Funding Requirements, and 1999-2001 Medium Term Plans*

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**T**he Centers updated medium-term plans (MTPs) for 1999–2001 in the context of the MTPs reviewed last year and their likely outcomes. TAC confirmed that the plans are broadly in line with those approved last year and recommended that the plans be extended to 2001. Following CGIAR endorsement at MTM98, the Centers will prepare financing plans for review by TAC in September, 1998. The TAC Chair reported that 1998 is the first year under the new MTP process and that all Centers have fully incorporated the project approach into their planning.

The research agenda recommended by TAC reflects Center activities slated for implementation during the second year of the 1998–2000 medium-term plans approved at MTM97. Investments in activities for increasing productivity, in particular in germplasm improvement, have declined. TAC cautioned against further declines for this activity. Investments in documentation, publications, and training for professional development are counter to the direction endorsed by the Group at MTM97. Work on aquaculture and forestry is proceeding toward the 2000 targets endorsed by the Group at MTM97, but there are projected shortfalls in investment in water management.

The Finance Committee expressed serious concerns about the \$405 million funding projection for 2001, which would require 6 percent annual growth for the next 3 years. The aggregation of center-proposed and TAC-approved programs would bring total funding for the 1999 research agenda to \$372 million, an 11 percent increase over the current 1998 estimate. The growth rate projected by ILRI, ICARDA, IITA, CIMMYT, and other centers is even higher. This increase significantly exceeds the 2 percent annual growth over the past 5 years.

The Finance Committee recommended a 1999 financial planning target of \$335 to \$345 million. Regarding the allocation of the World Bank's 1999 contribution, the Finance Committee confirmed that it did not intend to change the policy for allocating World Bank funds and, hence, Centers could assume that about \$33 million, representing about 11 percent of funding from members other than the World Bank, would be disbursed on a matching basis.

The Group also discussed concerns that the Finance Committee has been forced to spend most of its time resolving short-term financial problems in a crisis management mode. Members agreed that the Finance Committee is the principal mechanism in the CGIAR to deal with shorter term financial problems; however, strategic issues must be a priority. As the CGIAR's financial environment becomes more complex, the Finance Committee must devote sufficient attention to the issues that will determine the CGIAR's future financial well-being.

### **Conclusions**

The Group approved the substance of the 1999 Research Agenda recommended by TAC, endorsed the Finance Committee recommendations, and commissioned the preparation of center financing plans, which will be approved at ICW98. In support of the Chairman's proposition, the Group determined that the Finance Committee will move from crisis management to strategic funding issues.

## *External Program and Management Reviews*

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**T**he CGIAR considered external reviews of three centers—IRRI, IFPRI, and CIMMYT. Following discussions in parallel and plenary sessions, the Group endorsed the review panels' recommendations. Mr. Serageldin commended the panels for their excellent reports. The Group also endorsed a follow-up report on ICRISAT.

### **IRRI**

At a parallel session chaired by Weimin Yang, members discussed the fifth external review of IRRI. Review Panel Chair Bernard Tinker presented a summary of the findings and recommendations. Interim Director General Robert Havener read a written statement from Board Chair R. Rabbinge and presented the center's response. Lucia de Vaccaro presented the TAC commentary, which was followed by a general discussion. Many CGIAR members and IRRI's partners expressed appreciation for the Panel's report and pledged continued support for IRRI's work, which they view as very professional.

#### **HIGHLIGHTS OF PANEL RECOMMENDATIONS**

The Panel made 11 recommendations, which TAC fully endorsed. Highlights include the following:

- combine the three separate rainfed programs into a single program;
- design a strategic program on soil carbon nitrogen dynamics;
- strengthen the International Network for Genetic Evaluation of Rice and evaluate the bioinformatics program;
- update the policies on intellectual property rights and the private sector's involvement;
- undertake an annual assessment of performance of the board and director-general;
- strengthen the center's management systems; and
- prepare a capital plan and document future adjustments.

#### **DISCUSSION AND CONCLUSIONS**

The IRRI Board and Management responded to the recommendations. The participants noted the following points with satisfaction:

- IRRI's significant accomplishments;
- IRRI's strong emphasis on new developments in biotechnology and rice genomics, and its increasing collaboration with the private sector;
- IRRI's progress in overcoming management difficulties and the early results of the institutional stabilization process;
- IRRI's good financial health.

The participants endorsed the main recommendations of the Panel and:

- concurred with the integration of the three rainfed programs, with special consideration to ecoregional variations;
- commended IRRI's decision to modify its intellectual property rights and biotechnology policies in light of changes in the external environment and the CGIAR system;
- urged IRRI to continue to develop new rice varieties that are not only drought and pest resistant, but also have high nutritional content to serve rice producers and consumers;
- supported IRRI's planned study of soil carbon and nitrogen in coordination with other centers;
- encouraged greater focus on training, the social dimensions of research, and strengthened participatory research in cooperation with national agricultural research systems (NARS) and others; encouraged increased support of INGER in partnership with NARS;
- urged IRRI to make greater efforts to maintain institutional stability; and
- suggested regular assessments by the board and director general.

The Group accepted the review panel's recommendations and:

- thanked the panel for its excellent and highly professional work and endorsed its recommendations;
- commended the IRRI Board and Management for creating conditions in which high quality research work can continue;
- confirmed full support to IRRI.

## IFPRI

In a parallel session chaired by Ruth Haug, members discussed the second external review of IFPRI. Because Review Chair Samuel Paul was not able to travel to Brazil, the session watched a video presentation of the panel's findings and recommendations. Board Chair Martin Piñero and Director General Per Pinstrup-Andersen responded to the review. Don Winkelmann summarized TAC's observations, after which participants discussed the matters presented.

### MAIN RECOMMENDATIONS OF THE PANEL

The Panel made four recommendations covering IFPRI's research work, stressing water and globalization, outreach activities, impact assessment, and the relevance of IFPRI's activities. The Panel also encouraged IFPRI's Board to take a more active role in ensuring and monitoring the relevance and impact of the center's work.

## Discussion and Conclusions

### IFPRI'S ACHIEVEMENTS

TAC reaffirmed, and participants strongly endorsed, the review panel's positive assessment of IFPRI's contributions to food policy research. In addition to the 2020 Vision's significant contribution to improving policy and decisionmakers' awareness of agricultural issues, speakers noted its extraordinary value for decisionmakers to respond to their agencies and organizations. Some speakers felt that the panel's observations on the need to strengthen IFPRI's outreach work should be viewed in the context of IFPRI's success in reaching its own constituencies and its active participation in policy debates. The TAC Chair clarified that the observations were

aimed at contributing to the development of an outreach strategy and strengthening IFPRI's institutional capacity for outreach.

#### **IMPORTANCE OF POLICY RESEARCH WITHIN THE CGIAR**

All participants endorsed the key role of policy research in the CGIAR and its critical contribution to ensuring sustainable development. The review panel, TAC, and participants highlighted issues on which IFPRI could make important contributions. These include the following:

- use, availability, and management of water;
- globalization/open economies;
- agrarian institutions for the rural poor;
- new approaches to rural development;
- intellectual property rights;
- monitoring of food security and follow up of the World Food Summit;
- trade and the impact of the World Trade Organization on agriculture and poverty;
- impact assessment of policy research, including methodology development;
- new approaches to rural development;
- low income transition economies; and
- participatory policy research.

In its response to the panel report, IFPRI highlighted its plans to update its current medium-term plans through consultations with its stakeholders to identify future priorities and work programs. Participants noted that although there were numerous suggestions for additions to IFPRI's portfolio, there were few suggestions for deletions. Consequently, IFPRI's resources would have to be increased considerably to undertake these new topics while continuing to work on its existing rich portfolio.

The Group accepted the strong endorsement of the Review Panel's assessment that IFPRI has made remarkable progress in establishing itself as a premier research institution. Members also noted that the IFPRI's board and management have already taken steps to implement most recommendations.

#### **CIMMYT**

At a parallel session chaired by M. Badawi, members discussed the fourth external review of CIMMYT. Review Chair G. Jenkins presented a summary of the panel's findings and recommendations, and Board Chair Wally Falcon and Director General Tim Reeves presented the center's response. Lucia de Vaccaro presented the TAC commentary, which was followed by an open discussion.

#### **HIGHLIGHTS OF PANEL RECOMMENDATIONS**

The panel's overall view of CIMMYT is extremely positive. The panel felt that the center has impressive achievements, good management, and vigorous leadership. The panel testified to the quality of research and its relevance and impact on the daily livelihood of millions of rural and urban poor.

The Panel made 20 recommendations, which TAC broadly endorsed. Highlights include the following:

#### Research Programs

- Ensure that CIMMYT's wheat germplasm carries effective combinations of genes resistant to all three rust diseases and incorporates both improved yield potential and increased stress tolerance.
- Increase information and germplasm flows between headquarters and regional offices.
- Increase collaboration between the biotechnology center and research programs.
- Investigate why farmers have not adopted improved maize open-pollinated varieties and hybrids on more than 40 percent of the maize area in developing countries.

#### Crosscutting Programs

- Strengthen CIMMYT's work on natural resources management and better integrate the economics and research programs.
- Improve priority setting and the linkages with resource allocation.

#### Governance and Management

- Develop full costing of the outputs of all breeding programs.
- Strengthen management information systems and improve the flow of budgetary information to the Board.
- Commission an external review (CCER) of the project management system.

### DISCUSSION AND CONCLUSIONS

Participants commended the Panel for an outstanding report that clearly identified important issues and made strategic recommendations. They recognized that some of the management issues resulted from a difficult financial situation in the mid-1990s. They discussed and endorsed the recommendations, noting that:

- more than 70 percent of the wheat area in developing countries (excluding China) — up to 50 million hectares—is planted with CIMMYT-derived materials.
- CIMMYT is undergoing an impressive renewal after a difficult period that was aggravated by a funding crisis; there have been many managerial improvements.
- Partners from national agricultural research systems hold CIMMYT in high esteem.

Participants urged improving procedures to allocate resources to newly defined projects in the mid-term plan, recognizing that increased reliance on restricted funding makes the task more difficult. They stressed the need to generate increased synergies between CIMMYT's biotechnology, economics, and natural resources management research and its maize and wheat projects, and further improve internal priority-setting processes. They also encouraged CIMMYT to determine why such a high portion of the maize area in developing countries is not planted with improved maize materials. In addition, they called for a repositioning of the maize program to improve yields and yield stability in marginal environments.

Participants noted that the Panel expressed concern about the continuing viability of CIMMYT's programs in triticale and barley (jointly with ICARDA), recommending that additional funds be sought as needed. They called for improved information flows between maize researchers in headquarters and regional projects, and greater collaboration between the biotechnology center and the wheat and maize programs. They also called on

the economic program to strengthen its presence in Asia and place greater emphasis on determining how macroeconomic policies affect wheat and maize in selected countries.

CIMMYT's responsiveness to the panel's recommendations encouraged the participants. The CIMMYT Board will commission an external review by mid-2000 to assess progress toward implementing the panel's recommendation of a project-based approach to research management.

The Group accepted the recommendation to:

- fully endorse the Review Panel's report and commend the Panel for an exemplary effort;
- commend CIMMYT's Board and Management for its impressive record of scientific research and for a well-governed and managed center;
- take appropriate steps to enable centers to charge full costs for their projects;
- maintain strong support for this flagship center.

## ICRISAT

At a parallel session chaired by Paul Egger, ICRISAT Director General Shawki Barghouti briefed the Group on ICRISAT's progress in implementing the recommendations of the 1996 External Review. TAC suggested the briefing at MTM98 instead of the mid-term review recommended by the 1996 Review Panel.

Mr. Barghouti described ICRISAT's new vision and strategy. Don Winkelmann summarized TAC's comments on ICRISAT's actions in response to the review. Following discussions, the Chair summarized the major points before concluding the session.

### ICRISAT'S NEW VISION AND STRATEGY

ICRISAT's vision is to be a premier center of excellence in agricultural research for development of the semi-arid tropics (SAT). ICRISAT strives to be more open, partnership-oriented, and efficient. It also seeks to become an effective bridge for knowledge and technology exchanges between Asia and Africa, bringing the best in science to solve the problems of the poor in the semi-arid tropics. Its mission is to increase crop productivity and food security, reduce poverty, and protect the environment in the semi-arid tropics through partnership-based international agricultural research.

ICRISAT will focus on three key resources of the semi-arid tropics:

- research on the potential of SAT resources;
- research to promote better use of SAT resources;
- technology sharing with partners, including studies of technology adoption and use.

ICRISAT will devote 46 percent of its resources exclusively to Africa. The directors of its natural resources management (NRM), socioeconomics, and policy programs will be based there. ICRISAT has also initiated a major renewal program, covering administration, personnel, management, and finance. It is in the process of consolidating its operations in Niger.

Mr. Winkelmann commended ICRISAT for taking decisive steps to transform the institution, noting that it is on the right track.

## DISCUSSION

Participants welcomed ICRISAT's new vision and strategy, applauded the consolidation of programs, and discussed the following points:

- *Natural Resource Management.* Mali was selected for the natural resource management work, because the region's natural resources are better suited to ICRISAT's research needs than the alternative site at Niamey.
- *Biotechnology.* Seventy percent of ICRISAT's genetic utilization work and increased trait identification activities will be geared toward Africa. Placing the coordination of genetic resource management at Patancheru will not deprive African partners of the benefits from biotechnology work.
- *Nigeria.* ICRISAT welcomed the possibility of new partnerships in Nigeria.
- *Low agricultural growth rates in the SAT.* ICRISAT's crop improvement work significantly affected yields in the SAT, but this alone is not sufficient to improve the 1 percent per annum agricultural growth rate. ICRISAT's watershed program, aimed at improving efficient water delivery systems, could have a large impact.
- *ICRISAT's work in Latin America.* ICRISAT plans to spend 7 percent of its resources in Latin America as part of its global crop mandates. Its work in Brazil could allow ICRISAT to transfer Latin American technologies to Asia and Africa.

The Group accepted the recommendations and:

1. Praised the decisive steps ICRISAT has taken in response to the external review, the integrated approach to programs, and the shift in research leadership to Africa. They also welcomed further studies on the impact of ICRISAT's natural resource management work and the emphasis on genetic resource utilization work in Africa.
2. Urged ICRISAT to explore fully the potential for new partnerships with countries, such as Nigeria.
3. Expressed concern about the unsuitability of the Niamey site for wide-scale natural resource management work and the implications for the whole system. A lesson for the CGIAR is that heavy investments in infrastructure can severely constrain the Centers' future flexibility and adaptability. The participants called on the board to monitor the situation carefully.

## *CGIAR Partnership Activities*

**T**he Group received reports on partnership efforts from the Global Forum Steering Committee, NGO Committee, and Private Sector Committee.

### **Global Forum Steering Committee**

Fernando Chaparro, chair of the Global Forum Steering Committee (GFSC), presented a report on the status of the Global Forum, the next steps and activities, and the outlook for a global system of agricultural research.

In keeping with the need to promote broader dialogue with civil society (as envisaged by the CGIAR in the Lucerne Declaration), the Global Forum is seeking to promote the participation of national agricultural research systems, nongovernmental organizations, and farmers' organizations.

The Committee is developing a strategic agenda at the global and regional levels, as well as supporting regional and subregional fora, expanding communication and information, organizing the next Global Forum meeting, and supporting work on natural resources management, genetic resources management, and global partnerships by national agricultural research systems and others.

As part of developing its strategic agenda, the Committee is inviting national agricultural research systems and others to participate in research priority setting for their own regions. The exchange of experiences and methodologies will help build capacities of national agricultural research systems for such priority setting. The Committee is making a special effort to involve NARS in policy level discussions. The Committee is also promoting public-private sector ventures, in cooperation with the Private Sector Committee. New partnerships between industry and universities, like the Cornell and Montpellier proposals, are welcome. The joint venture between the Global Forum Steering Committee and the NGO Committee is expected to produce case studies on NGO partnerships with national agricultural research systems, universities, and others in agro-ecology and natural resources management.

Finally, Mr. Chaparro reported that the Global Forum on Agricultural Research secretariat at the World Bank's Agricultural Research and Extension Group is almost operational and that both FAO and ISNAR have signed letters of agreement for the NARS Secretariat at FAO.

The Group thanked Fernando Chaparro for his leadership of the Global Forum Steering Committee and welcomed his successor, Dr. R. S. Paroda.

### **NGO Committee**

Chair Miguel Altieri presented the report of the NGO Committee. The Committee participated in the TAC panels on biotechnology and intellectual property rights. The NGO Committee believes that the CGIAR and its cosponsors should advocate vigorously on behalf of poor farmers and agricultural biodiversity. An important point is the issue of farmers' rights to freely grow, exchange, and store seeds, which the CGIAR should support.

The Committee believes that biotechnology is an important tool within the range of options available to the CGIAR to accomplish its mission, but more attention must be given to the potential ecological risks. There is a need to prioritize the tools of biotechnology on the basis of which would be applicable to the conditions of the poor farmers.

The NGO Committee applauded the System Review Panel's consultative approach to obtain the widest possible range of viewpoints and asked the Panel to provide one or more fully developed alternative scenarios for the future of the system, which all members and partners would then discuss.

The Committee has visited CIMMYT, IRRI, and CIAT, where members engaged in discussions on the

environmental effects of biotechnology. The proceedings of the NGO Committee-ICRAF 1997 workshop on soil fertility replenishment have been published, and follow-up activities in Mali, Cameroon, and Uganda are being discussed. The NGO Committee sponsored meetings with farmers' groups in Kenya, Sri Lanka, and Ecuador to elicit farmers' perspectives on CGIAR research. The NGO Committee has also interacted with TAC and the Private Sector Committee, and is collaborating with the Global Forum on Agricultural Research. The Committee is interested in increasing NGO representation on boards, TAC, and external reviews panels.

The NGO Committee will sponsor a consultation on natural resources management before ICW98. The objective is to bring a selected group of experts from various disciplines and perspectives to define a natural resources management strategy aimed at poverty alleviation, food security, and sustainable agriculture in the developing world. Recommendations and guidelines of the consultation will be presented at ICW98 and serve as the basis for the NGO Committee, TAC, and international advanced research centers to jointly define the best operational natural resources management strategy to fulfill the CGIAR mission.

The Group discussed the Committee's wide range of activities and welcomed the report.

### **Private Sector Committee Report**

Vice Chair Asia Alaoui presented the Private Sector Committee (PSC) report to the Group. The Committee has added three new members since ICW97: Wallace Beversdorf (Novartis), Alberto Rubinstein (Shell Chile), and Seizo Sumida (Japan Bioindustry Association). The Committee has extensively discussed the biotechnology and proprietary science issues at its March meeting in Rome and MTM. The Committee has also focused on partnerships and interactions, including FAO, the IPGRI Board, the Chairman, NGO Committee, Global Forum Steering Committee, and System Review Panel. The Committee is postponing its next meeting until the end of September to be able to respond to the System Review Panel's report and review the PSC's future role.

In its comments on the reports of the biotechnology and proprietary science panels, the Committee stressed the need for the CGIAR to develop appropriate research and legal/regulatory policy frameworks that will allow maximum collaboration and cooperation with industry. The Committee strongly believes that resource poor farmers will be the ultimate beneficiaries of a more productive CGIAR/industry relationship.

Since biotechnology is an increasingly important technological factor in international agricultural research, and biotechnology is strongly linked to a proprietary technology system, the Committee recommends the following:

- The CGIAR should become an active advocate in articulating the benefits of agricultural biotechnology for the poor and food insecure.
- The CGIAR should become actively involved in the international debate on biosafety.
- The system should re-examine current levels of investment in biotechnology compared to genetic improvement research and its role in capacity building, while considering how to better attract private sector cooperation.
- Investment in biotechnology research should be considered in relations to the Centers' comparative advantage in conducting this type of research.
- Well articulated and specific positions on biosafety and intellectual property rights will form the basis for better engagement of the private sector research community.
- The CGIAR should consider more systemwide policies on intellectual property rights and biosafety to ensure the consistency of Center dialogues with outside institutions.
- The CGIAR should have centrally located expertise on intellectual property rights.
- The CGIAR should conduct a rigorous inventory of its technologies with respect to proprietary positions and should reconcile issues around ownership and use.

## *Reports from CGIAR Cosponsors and Committees*

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**T**he Group received reports and adopted the recommendations of the Cosponsors, and the Oversight, Finance, and Genetic Resources Policy Committees.

### **Cosponsors' Report**

UNDP representative Roberto Lenton presented the report of the CGIAR's cosponsors — Food and Agricultural Organization of the United Nations (FAO), United Nations Environment Programme (UNEP), United Nations Development Programme (UNDP), and the World Bank.

The Cosponsors are working to expand TAC membership to 15 plus the TAC chair. At ICW97, the Cosponsors recommended and the Group approved the appointment of five new members: Michael Cernea, Romania; Alain de Janvry, France; Elias Fereres, Spain; Maria Antonia Fernandez Martinez, Cuba; and Usha Barwale Zehr, India. Four vacancies remain. The Cosponsors have selected potential candidates from the following disciplines: basic science, applied science (plant breeding), natural resource management (forestry), and social science/policy (economics). The Cosponsors will make recommendations at ICW98.

The Impact Assessment Evaluation Group (IAEG) reached full membership in March with approval of the appointments of Cristina David, Frans Leeuw, and Peter Timmer. Shortly afterwards, Mr. Timmer received a new appointment at the University of California at San Diego and is no longer available. The Cosponsors reviewed a list of potential new members and recommended the appointment of Hans Gregersen as a member of IAEG. The Group endorsed the appointment. At ICW98, the Cosponsors will recommend a new member and appoint a new chair to replace Jim Peacock, whose term expires at the end of 1998.

At ICW97, the Cosponsors had approved \$3.05 million for the 1998 work programs (TAC \$2.3 million and IAEG \$.75 million). Savings from previous years will cover an apparent shortfall in 1998 contributions. The Cosponsors will examine TAC and IAEG's 1999 work program and budget at ICW98.

The Cosponsors selected the winner of the 1998 Nyle Brady Award, which they will present at ICW98. The Cosponsors reviewed 16 nominees based on the following criteria: role in the founding of the CGIAR, contributions to national programs as well as the CGIAR, and efforts to promote the CGIAR throughout the reform process.

### **Oversight Committee Report**

Andrew Bennett presented the report of the Oversight Committee.

The committee noted the positive responses to the External Program and Management Reviews for IRRI, IFPRI, and CIMMYT. The review of CIFOR is ongoing. CIFOR will hold a briefing on the impact of events in Indonesia on the center and staff at ICW98. The Committee also welcomed ICRISAT's new vision and the new ISNAR strategy. The Committee noted that international recruitment efforts are considering management, leadership, negotiating and political skills as well as important issues of technical competence, gender, and developing country perspective. The Committee noted that some centers are still facing funding problems and that pressure on development assistance and World Bank funding continues. The Committee expressed its firm support for continued World Bank participation.

Reaffirming their belief that future support and funding for the System requires demonstrations of CGIAR impact, Committee members expressed concern that the impact assessment discussions at ICW97 were unsatisfactory. IAEG staffing should be a high priority. The Committee also urged the Cosponsors to ensure staff continuity at the TAC secretariat, particularly during the System Review.

For biotechnology and intellectual property rights issues, the Committee took the position that the Centers are the legal entities of the System. Many of these issues should be handled and negotiated at the Center level. Country members of the CGIAR are inevitably bound by their national policies, ongoing negotiations, and international agreements their governments have signed and ratified. The Committee welcomed the Chairman's interventions on biotechnology and intellectual property rights, noting the importance of Centers behaving in a responsible, uniform, and transparent manner. Costs and benefits to the CGIAR and its stakeholders should always be a key consideration in dealing with biotechnology and intellectual property rights.

The committee welcomed the System Review Panel's progress report and its extensive interactions with the Committee. The Committee emphasized the following points for the Panel's consideration:

- include "poverty elimination" in the mission statement;
- define CGIAR strategies according to outcomes and intended impact;
- focus on the positioning and comparative advantage of the CGIAR and international agricultural research centers;
- balance genetic, natural resources management, information, and capacity building activities;
- emphasize the role of partnerships;
- improve the efficiency, impact, and influence of the CGIAR;
- identify what the CGIAR should stop doing or cutback.

The Committee encouraged the System Review Panel to make its final report available before ICW and asked the Chairman to convene an "ad hoc" group to review the draft report and develop proposals for consideration at ICW98.

In response to the Chairman's proposition, the Group discussed the need to improve the manner in which the CGIAR conducts its meetings. The Group decided that the CGIAR will adopt a streamlined approach to meetings to assure that meetings are strategically focused. The Secretariat and the Oversight Committee are charged with designating items to be treated under the streamlined procedure and constructing the agenda for the next meeting. The Committee indicated it would work with the Secretariat to streamline the agenda and structure of future CGIAR meetings.

## *Reports from the Technical Advisory Committee and the Impact Assessment Evaluation Group*

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### TAC

The Technical Advisory Committee (TAC) Chair Don Winkelmann reported on TAC activities for 1998 and 1999. TAC will present three studies at ICW98:

- partnerships between the Centers, national programs, and regional organizations in Latin America and the Caribbean;
- the effect of marginal lands on poverty and productivity;
- CGIAR logframe to identify data essential for the evaluation needs of the CGIAR and develop best practice guidelines.

The panel completed the main phase of CIFOR'S External Program and Management Review in March and ICRAF'S External Program and Management Review is now under way. Reviews will soon be initiated at ICLARM and ILRI, and planning and negotiations are underway for reviews of ICARDA, WARDA, and IIMI. The first review of the Systemwide Genetic Resources Program is in progress.

TAC and the CGIAR Secretariat will hold an exploratory meeting with specialists on nonmarket frameworks for organizing and implementing cooperation and collaborations, one of TAC strategic themes.

Under U.S. Agency for International Development auspices, Dr. Alison Withey is conducting an inventory of major CGIAR efforts related to the mitigation of climate change and adaptation to its effects. That report will be supplemented with information on the CGIAR'S indirect contributions to the mitigation of global climate change.

The next TAC meeting will be Sept. 20-26 at CIMMYT. In closing his report, Mr. Winkelmann warmly acknowledged the contributions of two departing staff members from the TAC Secretariat: Guido Gryseels and Amir Kassam.

## IAEG

Jim Peacock, chair of the Impact Assessment and Evaluation Group (IAEG), presented a status report on the IAEG work program and activities. The IAEG is preparing the 1998 annual report on CGIAR impacts for release at ICW98. The IAEG will develop best practice guidelines for reporting impact assessment and evaluation studies to strengthen center impact assessments. Participants in the project measuring the impact of CGIAR crop germplasm improvement on food production will meet this summer. The project is expected to be under way as soon as funds approved by the Cosponsors are available.

Ten case studies assessing the adoption of CGIAR agricultural innovations are nearing completion and will be discussed at a synthesis workshop at the end of June 1998. The workshop will provide a cross-system analysis of the findings of the individual case studies. The project report is scheduled to be presented at ICW98.

The study of the impact of CGIAR innovations on poverty will be discussed at ICW98. IFPRI will be the lead organization for this two-year project. Based on the availability of funds, an interim report is scheduled for ICW99 and the final report for ICW2000.

With ICRAF, the IAEG cosponsored an international workshop in April, 1998, on assessing the impact of natural resource management and has begun exploring a natural resources management study. The IAEG is also considering a number of "incubator" projects on biotechnology, institutional strengthening, post harvest technologies, integrated pest management, and biodiversity. The IAEG asked the Group for feedback on the priority of the proposed project areas.

## *Future Meetings*

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The Group accepted Germany's invitation to host MTM2000 and the next Global Forum. The dates and locations of future CGIAR meetings are the following:

1998 ICW	Oct. 26 - 30	Washington, DC, USA
1999 MTM	May 24 - 28	Location to be determined
1999 ICW	Oct. 25 - 29	Washington, DC, USA
2000 MTM	May 22 - 26	Germany (in conjunction with the Global Forum)
2000 ICW	Oct. 23 - 27	Washington, DC, USA

## *CGIAR Chairman's Summation*

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Ladies and Gentlemen:

We have reached the end of a Mid-Term Meeting which, by common consent, was both substantive and decisive. Many friends and colleagues helped us to hold this meeting. Our heartfelt thanks are due to all of them:

- President Cardoso, for his interest and involvement in the meeting, and for a clear exposition on the importance of agriculture in his eloquent address;
- the Government of Brazil, for inviting us, hosting our meeting, and showering us with lavish hospitality;
- Dr. Portugal, for his inspiring role as a research leader, his excellent presentation on Embrapa's impressive achievements, and his constructive participation in MTM98, not the least being his concluding statement a few minutes ago;
- Embrapa colleagues, at all levels, for their unstinting efforts to make this meeting a success;
- The World Bank's regional office, for encouragement and assistance;
- the interpreters, for making sense of all we said, and helping us to understand each other; and
- Alexander von der Osten and the CGIAR Secretariat staff for organizing this meeting, cheerfully giving many hours to the fulfillment of a myriad tasks.

Please join me in expressing our gratitude to all of them in a round of applause. Most of all, let me thank you, members of the group and the system, who made this meeting what it has been.

### **Governance**

We have made important headway at this meeting. We kept a commendable pace, briskly making important decisions. But in doing so, we lost nothing of the collegiality, the mutual respect, the capacity to listen, and the seriousness of purpose that all of you bring to the table. We maintained a strategic focus in our discussions, had more substance than process in what we did, and manifested those qualities that make this group truly one where the whole is more than sum of the parts. And we also demonstrated that we can indeed be nimble in our decisionmaking.

Any notion of Mid-Term Meetings being superfluous was, surely, dispelled. Any one of us who wonders whether we could have done without this MTM has only to ask himself/herself: what is it that we could *not* have done? What could we have eliminated? Dealing with substantive issues consumed all our time, with very little, if any, left for private pursuits. Not least in this area was our willingness to address the really big strategic and overarching issue of climate change. It was indeed an outstanding session, and obviously the forerunner of more to come. Moreover, the blend of formality and informality, the immediacy of personal contact, and that sense of being engaged in a common purpose cannot be achieved by e-mail or any other form of non-personal communication.

An example of the unrecorded but important advances from the informal contact, the "positive externalities" of the MTM, is the role of advanced research organizations. At ICW last year, I had called for strengthened collaboration with advanced research organizations. I am happy to note that Cornell and Montpellier has each responded positively, and that intensified contacts between them and the Centers as well as national agricultural research systems have taken place. I look forward to learning more about how these important projects are shaping up in the months ahead.

At MTM98 you dealt with the short term, the nuts and bolts that keep the machinery of the CGIAR in good order, and the long term, the issues and concerns that will occupy us and affect our beneficiaries well into the future. (A detailed account of the decisions taken will be available in the traditional end-of-meeting report.)

Our decisions were important, in some cases far-reaching, but they are not meant to preempt the recommendations of the System Review Panel, which has undertaken the daunting task of helping the CGIAR position itself for the next century. Many challenges press on us. To have postponed action on such on crucial matters as clarifying and making public the current practices of the CGIAR centers in germplasm management is neither justified nor desirable. Action at MTM does not foreclose future change. So we await the System Review with great anticipation, expecting the sagacity of the Panel to guide us through many complexities. We stand ready to adapt as needed in the light of the discussion of its recommendations.

And we need to gear up for our consideration of the Review Panel's report. In doing so, we will be able to test the effectiveness of the streamlined way of doing business which I outlined as **Proposition 1** in my opening statement on Tuesday.

**Proposition 1** requires the Oversight Committee — in coordination with the Secretariat — to construct the agenda and devise the most appropriate process for dealing with different agenda items. The committee will be in touch with you, and so will I, when planning special arrangements for our discussion of the System Review Panel's report. In response to suggestions from around this table, I plan to craft some actionable propositions for our consideration of the report and the agenda, in general.

## Research Agenda, Funding, and Staffing

The research agenda we adopted at MTM98 reflects our resolve to make a double shift in the research paradigm as a means of focusing our efforts on poverty alleviation and natural resources management. The research agenda we have adopted is consonant with the medium-term plans of the Centers. It looks 3 years ahead. It has two important, if conflicting characteristics: openness and vulnerability. I say openness because it does leave us scope to make adjustments and changes in the light of circumstances. But we are vulnerable, because a volatile financial environment might prevent us from undertaking all that we have agreed to do and achieving the full range of our expectations.

So, it was wise to retain a planning figure of \$335 million for the next year. This is not a ceiling, but only an indicative planning figure. What the real figure will be depends on what you and the Centers will decide between now and ICW. I urge you to be generous.

But, regardless of the figure retained or achieved, I remain seriously concerned about the systemic financial issues that remain unresolved. I am referring to delays in payments, the proportion of restricted funds, financing overheads, dwindling reserves, and the fact that a number of important activities that I mentioned in my opening statement still remain unfunded, despite the heroic efforts of our Finance Committee.

In the context of these lingering problems, it is appropriate that the Finance Committee should move from emergency fire-fighting and crisis management to a more strategic approach as spelled out in **Proposition 2**. A mechanism should be in place for the first such strategic effort to be launched by ICW98. The results of such efforts, coupled with the recommendations of the System Review Panel, will help us reshape our financing mechanisms for greater predictability, transparency, and accountability.

Such changes will benefit the management of the Centers, but above all, they will enable our staff in the Centers to do their work better.

Looking ahead in another staff-related area, we endorsed in **Proposition 3** the recommendation of the recent consultation on gender staffing, committing ourselves to support focused efforts to address gender staffing issues and expand these efforts to include additional staff diversity issues.

## Germplasm, Intellectual Property Rights, Biotechnology

The whole constellation of **Propositions 4 through 10** revolves around four major pieces:

**First, consolidating and disseminating a package of information outlining current practices at the Centers.** This is existing information, and it refers only to the Centers, not to sovereign governments or international organizations. The reason for consolidating this information into a single package that can be widely disseminated, is that there is ignorance and misunderstanding — both beyond and within the system — about how the Centers handle these matters. The appreciative response to this compilation all around this table suggests that it was, indeed, overdue. The package was ready this morning and is with you. The package covers the following:

- the ethical principles we adopted at this meeting;
- agreement with FAO covering 500,000 accessions;
- a standard form for germplasm acquisition agreement;
- a standard form for materials transfer agreement;
- steps Centers intend to take in cases of possible MTA violation;
- guiding principles on intellectual property rights;
- statement on center interactions with private sector and others on proprietary technology; and
- Centers' position statement on biotechnology.

Our utmost thanks are due to center directors and board chairs for completing this undertaking. I am glad to note, as well, that PARC plans a public awareness campaign to explain to the world what we are really doing in the areas of germplasm management, biotechnology, and intellectual property rights. I welcome this initiative—it is a far better approach than reacting defensively to allegations based on misunderstandings.

The center boards have also formally asked that the CGIAR Chairman or his designee should present the current position of the Centers on their behalf, in alliance with interested partners, in the multiplicity of fora where these issues are being discussed. In doing so, I will, of course, reflect the consensus views of all of you. Our voice and views, on behalf of the poor and the environment, should be heard in the fora where discussions are shaping the basis of a new regime.

**Second, the review and updating of existing material,** providing clarifications and elaborations on the package that you now have in hand. That will be the clarification of the practices and positions of the Centers, and still, as with the current practices, does not engage the governments or institutions represented around this table. The final text should be distributed in time for review at ICW98. These documents, with the additional clarifications and elaborations, will constitute better building blocks for a comprehensive genetic resources policy, which we will all help design in the light of evolving international agreements and the report of the System Review Panel.

**Third, putting our own house in order in the area of proprietary science,** completing an audit of current practices, and arranging for the development of advisory services. Your support of this “piece” ensures that it will be done, with the details to be worked out through consultation. The Finance Committee has acted in accordance with that requirement.

**Fourth, clarifications in the existing FAO-Centers agreements,** to be jointly agreed on by representatives of both parties. With respect to germplasm designated by the Centers as coming under the Agreements between the Centers and FAO, there are a number of issues that are currently under review including, *inter alia*:

- the guidelines for deciding what should, or should not, be “designated;”
- a clear interpretation of the term “germplasm and related information;”

- what is meant by “unrestricted access” for accessions that may be difficult to regenerate or are diseased;
- how to respond to requests for very large sample sizes or numbers;
- circumstances under which Centers might reasonably aim to recover part or all of the multiplication and/or distribution costs included in fulfilling a request.

The clarifications will set down appropriate details and definitions, for the use of germplasm in CGIAR collections.

In essence, Propositions 4 through 10 have been adopted with minor modifications. Thus the resulting four “pieces” I have just described position us well to clarify and improve our actions, and they do not preclude our ability to adapt to new events, including recommendations by the System Review Panel, new national laws, and international statutes.

Finally, on the issues covered by Propositions 4 through 10, I note greater clarity in our view on biotechnology, which I could summarize as follows:

The CGIAR recognizes the importance of biotechnology in agriculture and natural resources management as one of a range of tools that can be used to increase productivity and address social and economic constraints to improving livelihoods for the poor in developing countries.

To further its mission of poverty elimination, food security, sustainable agricultural development while conserving the natural resource base, the CGIAR will:

- form strategic alliances and partnerships with both public and private sector institutions/organizations engaged in biotechnology, and
- develop need-based in-house biotechnology capability that will (a) address present and future needs of small scale farmers and (b) contribute to relevant capacity building of national agricultural research systems.

In all its operations the CGIAR will comply with international and national biosafety requirements. In that context, I also note our collective wish to pursue the “genome meeting” that we discussed.

The issue of farmers’ rights has also come up. It is philosophically easy to accept, but operationally difficult to implement. We all want to ensure that poor farmers are empowered to the maximum extent possible, including their role in conservation and development of seed, and we of the CGIAR have supported and will continue to promote this philosophy. It is reflected in our ethical principles. We know that many others are grappling with these issues, and we look forward to the results of the discussions in such fora as the FAO Commission on Genetic Resources for Food and Agriculture and the Convention on Biological Diversity.

## And Now?

I have been told by many of you that the Brazil Mid-Term Meeting has been “different,” that there was “something special” about it. What exactly does this imply? What was so different? What was special? What was its defining distinction? Well, Klaus Winkel, with characteristic wisdom, put it in a nutshell when he said in plenary that never before has the CGIAR been “*more open, more participatory, more willing to confront issues.*”

In the spirit that Klaus described, we grappled with strategic issues, reaffirmed our commitment to the application of the best possible science to serve the needs of the poor and the environment, and conducted our deliberations in a resolute manner. This is a wonderful prelude to our consideration of the System Review. Summoning the same candor and determination, we can celebrate our strengths and confront our weaknesses as we respond to the System Review, and prepare to chart a course of renewal for the next century.

Think of these matters as you leave for home. Travel safely, and be ready for our next effort in Washington. Thank you.



# *Annexes*



**CGIAR 1998 Mid-Term Meeting**

# *The MTM98 Agenda*

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## **Monday, May 25 Brazil Day**

## **Tuesday, May 26 - Friday, May 29**

### **1. Opening Session**

- i. Chairman's Opening Statement
- ii. Discussion
- iii. Chairman's Announcements
- iv. Adoption of the Agenda

### **2. Biotechnology**

- i. Report from the CGIAR Panel on General Issues in Biotechnology
- ii. Report from the CGIAR Panel on Proprietary Science and Technology
- iii. TAC Views on Recommendations of the Panels
- iv. Commentaries by PSC, NGOC, GRPC
- v. Discussion (Plenary)
- vi. Discussion of General Issues in Biotechnology Panel Recommendations (Parallel Session I)
- vii. Discussion of Proprietary Science and Technology Panel Recommendations (Parallel Session II)  
— Draft Ethical Principles on IPR
- viii. Reports from Parallel Sessions (Plenary)
- ix. Discussion (Plenary)
- x. Conclusions and Next Steps

### **3. Climate Change**

- i. Presentations on Major Science and Policy Questions
- ii. TAC Comment on Climate Change and the CGIAR
- iii. Discussion

### **4. System Review of the CGIAR (Plenary)**

- i. Overview of Initial Findings of the Review Panel
- ii. Science and Strategy Issues  
— Presentation  
— Discussion
- iii. Governance, Structure, and Finance Issues  
— Presentation  
— Discussion
- iv. Summation by Chairman

### **2. CGIAR Research Agenda and Funding Requirements**

- i. 1999–2001 Research Agenda Framework
- ii. 1999 Research Agenda
- iii. Discussion
- iv. 1999 Funding Requirements
- v. Discussion

### **3. Strengthening Partnerships**

- i. Perspectives of the Global Forum on Agricultural Research
- ii. Perspectives of the NGO Community
- iii. Private Sector Perspectives
- iv. Discussion

### **4. Evaluation**

- i. External Review of IRRI (Parallel Session I)
- ii. External Review of IFPRI (Parallel Session II)
- iii. External Review of CIMMYT (Parallel Session III)
- iv. Follow-up of the External Review of ICRISAT (Parallel Session IV)
- v. Reports from Parallel Sessions
- vi. Discussion
- vi. Conclusions

### **5. Recommendations from CGIAR Cosponsors and Committees**

- i. Cosponsors
- ii. Oversight Committee
- iii. Finance Committee
- iv. GRPC
- v. TAC
- vi. IAEG
- vii. Discussion and Approval of Committee Recommendations

### **6. Other Business**

### **7. Chairman's Closing Remarks**

## List of Documents

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### DOCUMENTS ISSUED PRIOR TO THE MEETING

Document Number	Document Title
MTM/98/01/Rev.1	Revised Draft Agenda
MTM/98/02/Rev.2	Revised Schedule of Events
MTM/98/03/Rev.3	List of Documents
MTM/98/05	Financial Requirements of the 1999 CGIAR Research Agenda
MTM/98/05a	1999 CGIAR Research Agenda Project Portfolio
MTM/98/06	Global Forum on Agricultural Research Agendas for the GFAR-Related Meetings
MTM/98/07	Report of the Genetic Resources Policy Committee
MTM/98/08	Private Sector Committee Comments on the Reports of Biotechnology and Proprietary Science Panels and Report of the Eighth Meeting of the CGIAR Private Sector Committee
MTM/98/09	<i>Everybody Complains about Climate . . . What Can Agricultural Science and the CGIAR Do about It?</i> by R. Gommès and L. O. Fresco.
MTM/98/10	Report of the Impact Assessment Evaluation Group (IAEG)
MTM/98/11	CGIAR System Review – Preliminary Findings
SDR/TACIAR/98/6.1	Report of the CGIAR Panel on General Issues in Biotechnology
SDR/TACIAR/98/7.1	Report of the CGIAR Panel on Proprietary Science and Technology
SDR/TACIAR/98/14	CGIAR 1999 Research Agenda and Initial Proposals for 2001
SDR/TACIAR/97/9	Fourth External Review of CIMMYT
SDR/TACIAR/98/1	Fifth External Review of IRRI
SDR/TACIAR/98/12	Third External Review of IFPRI

### DOCUMENTS ISSUED AT THE MEETING:

CGIAR Chairman Ismail Serageldin's Statements:

- Opening Statement at MTM98
- Announcements
- Closing Statement
- Brazil Day Statement

Technical Advisory Committee (TAC) Chairman Don Winkelmann's Statements:

- May 26, 1998: TAC Remarks on Global Climate Change
- May 27, 1998: TAC's Findings on the Centre 1999 Plans and Proposals for 2001
- May 27, 1998: TAC Remarks on Biotechnology Panel Reports
- May 29, 1998: TAC Chair's Report

Parallel Session Reports:

- May 27, 1998: Parallel Session I: General Issues in Biotechnology
- May 27, 1998: Parallel Session II: Proprietary Science and Technology
- May 28, 1998: Parallel Session I: Discussion of the Second External Review of IFPRI
- May 28, 1998: Parallel Session II: Discussion of the Fifth External Review of IRRI
- May 28, 1998: Parallel Session III: Discussion of the Fourth External Review of CIMMYT
- May 28, 1998: Parallel Session IV: Follow-Up to the External Review of ICRISAT

Report of the 15th Meeting of the CGIAR Oversight Committee. May 27, 1998.

Report of the NGO Committee to the CGIAR Mid-Term Meeting, 1998. May 23-24, 1998.

Center Directors Committee Statement to MTM98 on Genetic Resources, Biotechnology, and Proprietary Science. May 29, 1998

Center Board Chairs Committee (CBC) Report to the CGIAR Mid-Term Meeting. May 29, 1998

Global Forum on Agricultural Research: Reports of the Meetings held at MTM98

- 3rd Global Forum-Steering Committee. May 24, 1998
- 3rd NARS-Steering Committee. May 23 & 27, 1998
- 2nd GFAR Support Group Meeting. May 28, 1998

Preliminary End-of-Meeting Report

*The above documents are available on the CGIAR Website:*

<http://www.worldbank.org/html/cgiar/publications/mtm98/mtm98.html>

# *The CGIAR's Ethical Principles Relating to Genetic Resources*

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## **Introduction**

The CGIAR was founded on the ethical imperative of eliminating hunger and starvation and has, since its inception, followed certain ethical principles. Increasing food security<sup>1</sup> and alleviating poverty have long been central to the system's science-based humanitarian mission. With the growing complexity of the problems being addressed by the research of the Centres, the expanding number of partners with whom they work and the rapidly evolving scientific, social and economic environment within which they operate, an increasing need has been felt for a clearer enunciation of the System's underlying ethical principles. Greater transparency about what the CGIAR really stands for is important in enabling strong and unambiguous relationships to be forged with a wide range of partners.

The main ethical principles are presented under four headings: Equity; Trusteeship of Genetic Resources; Respect, Responsibility and Integrity in Science; and Social Benefits. These are intended to encapsulate the essential principles followed by the CGIAR in relation to its work on genetic resources and in the pursuance of its goal: to contribute through agricultural and natural resources research and partnerships to sustainable food security and the alleviation of poverty.

## **Equity**

- The CGIAR works for the attainment of equity in the conservation, sustainable use and the sharing of benefits derived from genetic resources. This commitment to fairness requires that emphasis be given to the needs of resource poor communities and to disadvantaged members of society.
- The CGIAR recognizes the contribution of many different communities and individuals, especially of women, to the conservation and enhancement of genetic diversity of potential use for food and agriculture, and will strive to ensure they benefit from such contributions. The CGIAR will avoid situations where a foreseeable reduction of local communities' access to, and benefits from, genetic resources might occur.
- The CGIAR recognizes that its major strength lies in its partnerships with national agricultural research systems and other organizations, and is committed to sharing credit in an equitable manner.

## **Trusteeship Of Genetic Resources**

- The CGIAR Centres hold genetic resources in trust for the international community. In the case of plant genetic resources for food and agriculture this is, to a great extent, recognized through agreements with FAO. As trustees of genetic resources the CGIAR Centres recognize their responsibility to be impartial, transparent and fair in their administration of the trust; to respect and observe national

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1. According to the definition in the World Food Summit Plan of Action, **food security** exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life.

regulations and international conventions, in particular the Convention on Biological Diversity; to be accountable for their actions; and to exercise due care and diligence in conserving the material for the use of present and future generations and in making it readily available for use for the public good.

## Respect, Responsibility and Integrity in Science

- The CGIAR's work on genetic resources respects the general scientific principles of good faith and the search for truth. However, the CGIAR is guided by its particular humanitarian and equity-based concerns, and not the pursuit of knowledge for its own sake.
- The CGIAR's scientific work, including that on biotechnology, is based on the principles of accountability, responsibility and precautionary action. For any undertaking, potential benefits shall clearly outweigh foreseeable risks, emphasizing broad societal interests such as food security, poverty alleviation and environmental sustainability.
- The CGIAR recognizes and respects the integrity of culture, tradition and the relationship of local people with their natural environments. Likewise the CGIAR respects the aspirations and culture of partner institutions and the societal context within which they operate.
- The CGIAR adheres to national regulations and to relevant internationally accepted codes of behaviour and conduct in areas of plant and animal biology; the collection and transfer of genetic resources; biosafety; animal welfare; and intellectual property.

## Social Benefits

- The CGIAR aims to promote lasting social benefit through its research and partnerships for the international public good. In its activities on genetic resources the CGIAR strives to increase individual, local and national food and livelihood security in developing countries through sustainable advances in productivity, nutritional quality, stability and through promoting biological and food diversity. For this purpose it is accountable for the dimensions of social and gender equity and environmental sustainability in its research, human resource development and capacity building programmes. The CGIAR aims to support the building of national capacity and institutions to manage, develop and conserve genetic resources.

## Conclusion

The above principles, while not exhaustive, are intended to provide an overall statement of ethical principles relating to the CGIAR's work in genetic resources. They are also intended to provide a basis on which individual Centres can further elaborate their own guiding ethical principles or codes of conduct, and set up monitoring mechanisms, as appropriate. In implementing the above principles, the CGIAR Centres will work in partnership with national systems and other relevant organizations.

Endorsed by the CGIAR Genetic Resources Policy Committee, May 4, 1998.

# List of Participants

## CHAIRMAN

Ismail Serageldin  
Chairman, CGIAR, and  
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The World Bank  
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## ACRONYMS AND ABBREVIATIONS

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ARO	Advanced Research Organization
CBC	Committee of Board Chairs, CGIAR
CBD	Convention on Biological Diversity
CDC	Center Directors Committee, CGIAR
CGIAR	Consultative Group on International Agricultural Research
DAC	Development Assistance Committee, OECD
ESDAR	Environmentally Sustainable Development Agricultural Research and Extension Group, World Bank
FAO	Food and Agriculture Organization of the United Nations
FC	Finance Committee, CGIAR
GDP	Gross Domestic Product
GFAR	Global Forum on Agricultural Research
GFSC	Global Forum Steering Committee
GRPC	Genetic Resources Policy Committee, CGIAR
IAEG	Impact Assessment and Evaluation Group, CGIAR
ICW	International Centers Week, CGIAR
IFAD	International Fund for Agricultural Development
IPR	Intellectual Property Rights
MTM	Mid-Term Meeting, CGIAR
NARS	National Agricultural Research System(s)
NGO	Non-governmental Organization
NGOC	NGO Committee, CGIAR
OC	Oversight Committee, CGIAR
ODA	Official Development Assistance
OECD	Organization for Economic Co-operation and Development
ORSTOM	Institut Français de Recherche Scientifique pour le Développement en Coopération
QTL	Quantitative Trait Loci
PAA	Public Awareness Association, CGIAR
PAC	Public Awareness Campaign, CGIAR
PARC	Public Awareness and Resource Mobilization Committee, CGIAR
PSC	Private Sector Committee, CGIAR
TAC	Technical Advisory Committee, CGIAR
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
\$	All financial data are given in US dollars.