The first meeting of a global consultative process on an international assessment of the role of agricultural science and technology in reducing hunger, improving rural livelihoods and stimulating economic growth over the coming decades.

Dublin, Ireland
6-8 November 2002

The global community confronts an enormous challenge: stimulating economic growth in rural areas where 75% of the world's very poor people currently reside, and ensuring the nutritional security of a world population that is growing in size and evolving in consumption patterns, without intensifying environmental degradation, social inequity or adverse consequences for human health.

Convened by the World Bank

Hosted by the
Department of Agriculture and Food
Government of Ireland

Co-chairs

Bob Watson
Rita Sharma
Claudia Martinez Zuleta
Seyfu Ketema
Louise Fresco

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November 6

1900-2100	**Reception**	**Hosted by the Government of Ireland**
	Speaker	**Mr. Joe Walsh, T.D.** **Minister of Agriculture and Food**
	Venue	**BORD BIA (The Irish Food Board)** **Clanwilliam Court, Mount Street Lower, Dublin 2** **Tel - 353 (0)1 668 5155**

November 7

Alexander Hotel
Merrion Square, Dublin 2

0900-1000	**Plenary**	*Goals of meeting* Ian Johnson, Vice-President, World Bank; Chair CGIAR V*alue and role of assessments* Bob Watson, Chief Scientist, World Bank
1000-1030	**Tea**	
1030-1200	**Plenary**	*Organization of meeting; consultative process; interactive discussion;* Chaired by Bob Watson
1200-1300	**Lunch**	

1300-1600 Breakout groups (attend group designated on name badge)

Key questions and scope of assessment

Chair: Rita Sharma	Group I
Chair: Seyfu Ketema	Group II
Chair: Claudia Martinez Zuleta	Group III
Chair: Louise Fresco	Group IV

1600-1630 Tea

1630-1800 Plenary *Key conclusions of breakout groups*
Rapporteurs: Judi Wakhungu; Mauricio Lopes; Carl Greenidge; Prabha Mahale

1930-2130 Dinner ***Hosted by the World Bank at the Berkeley Court Hotel***

November 8

Alexander Hotel
Merrion Square, Dublin 2

Participants will attend the group designated on name badge.

0900-0930 Plenary
0930-1200 Breakout groups
Governance and organization of proposed consultative process and assessment

Chair: Rita Sharma	Group III
Chair: Seyfu Ketema	Group IV
Chair: Claudia Martinez Zuleta	Group I
Chair: Louise Fresco	Group II

1230-1330 Lunch

1300-1430 Regional meetings
Discuss participants in videoconferences and regional meetings and other regional considerations

1430-1500 Tea

1500-1700 Plenary *Summary of the key conclusions of the breakout groups*
Rapporteurs

Next steps – consultative process
Co-chairs

Participants - Dublin
6-8 November 2002

Christine Akemo, Kawanda Agricultural Research Institute, Uganda
Bogalech Alemu, Ethiopian Ministry of Agriculture
Ivar Baste, UNEP
Zoltan Bedo, Hungarian Academy of Sciences
Jim Beecher, Department of Agriculture and Food, Ireland
Roberto Bendana McEwan, Ministry of Agriculture, Nicaragua
Juan Adolfo Bermudez, Corporacion La Ceiba, Colombia
Michael Bosch, Advisory Service on Agricultural Research for Development, Germany
Esmeralda Brown, Southern Caucus for Sustainable Development
Rodney Brown, United States Department of Agriculture
Samuel Bruce-Oliver, FARA
Ann Butler, Ireland
Kevin Cleaver, World Bank
Peter Core, Australian Center for International Agricultural Research
Paddy Cunningham, Trinity College Dublin
Howard Dalzell, Concern, Ireland
Vibha Dhawan, Tata Energy Research Institute
Philip Dobie, United Nations Development Program
Qu Dongyu, Chinese Academy of Agricultural Sciences
Carlos Dora, World Health Organization
Sam Dryden, Emergent Genetics, USA
Ruben Echeverria, Inter-American Development Bank
Wim van Eck, World Health Organization
Adel El-Beltagy, ICARDA
Paul Faeth, World Resources Institute
John Falloon, Bowlands, New Zealand
Danelle Farmer, Syngenta, Switzerland
Fintan Farrelly, Ireland AID
Elias Fereres Castiel, Spanish Academy of Sciences
Bruno Ferrari, Seminis, Mexico
Jim Flanagan, Teagasc, Ireland
Rick Foster, Kellogg Foundation, USA
Roland Fox, DIFID, United Kingdom
Louise Fresco, FAO
Sakiko Fukuda-Parr, United Nations Development Program
Carl Greenidge, Technical Center for Agricultural and Rural Cooperation (CTA)
Benedikt Haerlin, Greenpeace International
Michael Hansen, Consumer Policy Institute/Consumers Union
Mark Holderness, CAB International
Rob Horsch, Monsanto, USA
Greg Jaffe, Center for Science in the Public Interest
Brian Johnson, English Nature, United Kingdom
Ian Johnson, World Bank
Charlotte Johnson-Welch, International Center for Research on Women
Shafqat Kakakhel, United Nations Environment Program
Monica Kapiriri, CGIAR NGO Committee
Anne Kapuscinski, STAP/GEF
Sean Kennedy, IFAD
Seyfu Ketema, ASARECA
Hans Klemm, Economic Bureau, United States Department of State
Lutz Knabe, Bayer CropScience
Odin Knudsen, World Bank
Mauricio Lopes, EMBRAPA, Brazil
Denis Lucey, Department of Food Business and Development, University College Cork

Jens Mackensen, United Nations Environment Program
Prabha Mahale, International Federation of Organic Agriculture Movements
Claudia Martinez Zuleta, Colombia
Julia Moore, Woodrow Wilson International Center for Scholars
Patrick Mulvany, Intermediate Technology Development Group
Aidan O'Driscoll, Department of Agriculture and Food, Ireland
Ray Offenheiser, Oxfam
Arturo Ortiz, Argentina
Nita Pallai, Consumers International
Miles Parker, DEFRA, United Kingdom
Eija Pehu, World Bank
Elsa Quiroga, Third World Organization for Women in Science
Francisco Reifschneider, CGIAR
Alan Reilly, Food Safety Authority, Ireland
Bobby Richey, Foreign Agricultural Service, United States Department of Agriculture
Jean Francois Rischard, World Bank
Thomas Rosswall, International Council for Science
Sibiri Sawadogo, Burkina Faso
Susan Sechler, Rockefeller Foundation, USA
Carlos Sere, ILRI
Louise Shaxson, Interdisciplinary Research Management, UK
Rita Sharma, Ministry of Agriculture, India
Takashi Shinohara, Ministry of Agriculture, Forestry and Fisheries, Japan
Anne Shusterman, Emergent Genetics
Vaclav Smil, University Manitoba, Canada
Meredith Soule, United States Agency for International Development
Lucilla Spini, UNESCO
Pieter Stek, Netherlands
Tom Teehan, Department of Agriculture and Food, Ireland
Dennis Tirpak, UN Framework Convention on Climate Change
Christian Verschueren, CropLife International, Belgium
Alexey Vikhlyaev, UNCTAD
Judi Wakhungu, African Center Technology Studies
Robert Watson, World Bank
Alain Weil, CIRAD, France
Alex Wijeratna, ActionAid
Mumeka M. Wright, Bimzi, Zambia
Hamdallah Zedan, UNCBD
Usha Zehr, Mahyco, India

Goals for Dublin

1. ***Consultative process:*** Discuss and agree on the consultative process (November 2002 to June 2003)

- Finalize the format (i.e., the mixture of web-based, regional video-conferences and regional meetings) and schedule. The format will be subject to availability of funding.
- Discuss methods to maximize transparency and inclusiveness in each element of the consultation process, e.g., selection of participants, single vs. multiple stakeholder meetings.
- Identify locations and, where possible, participants of regional meetings and videoconferences.
- Finalize members (about 30) and terms of reference for steering committee.

2. ***Key questions and scope of the proposed assessment***: Discuss the key scientific, technical, policy and institutional questions that could be assessed, i.e., the scope of the proposed assessment

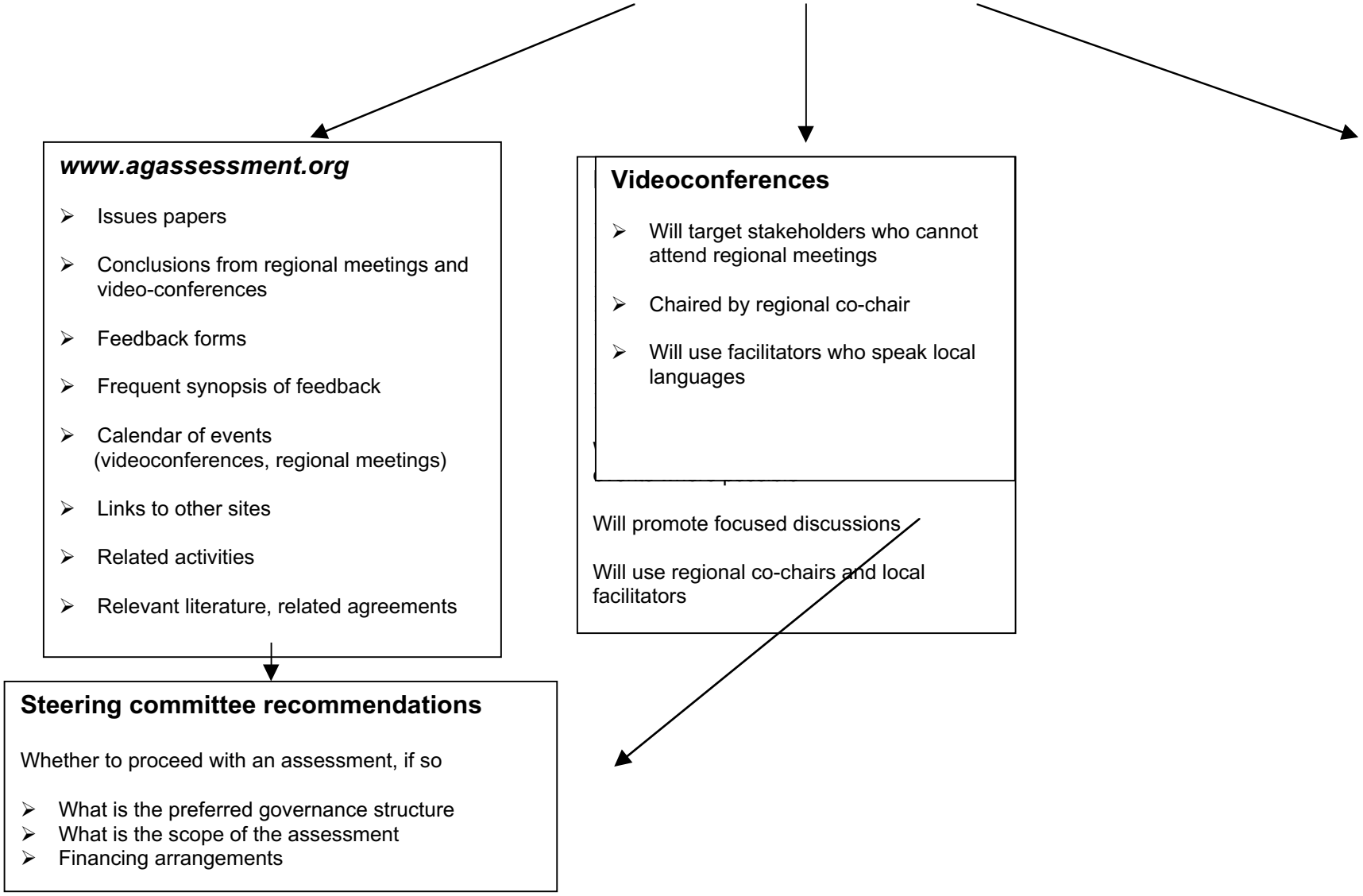
- Identify key issues/questions for the assessment.
- There will be NO debate on the merits and demerits of any particular technology or policy; this type of discussion will be the purview of the assessment process

3. ***Assessment governance and organizational structure:*** Discuss the advantages /strengths and disadvantages/weaknesses of different governance structures, e.g., intergovernmental, non-governmental or a hybrid for each phase of the proposed assessment

- Scope of the assessment
  a) Who participates defining the key questions/topics for the assessment?
  b) Who finalizes the scope of the assessment?
- Structure of the assessment report
  a) How many volumes –single versus multiple– who decides?
  b) The structure of each volume(s) – e.g., a Summary for Policymakers (5-10 pages), a Technical Summary (25-75 pages) and the full assessment report (250-1000 pages) – who decides on structure?
  c) Structure and style of each chapter – executive summary?
- Oversight and management of the assessment
  a) Who provides the policy oversight – intergovernmental, non-governmental or mixture?
  b) Who manages the process?
- Preparation of the assessment report
  a) Who prepares the assessment?
  b) Who nominates lead authors?
  c) Who makes the final selection of authors?
- Peer-review of the Assessment
  a) Who makes the final selection of authors?
  b) Who approves the design of the peer-review, e.g., what mixture of expert and government peer-reviews?
  c) Who nominates the expert reviewers, or is it a totally open process?
  d) Who selects the peer reviewers if it isn't an open process?
- Approval of the Assessment
  Who approves/accepts/adopts the various elements of the assessment, i.e., the Summary for Policymakers, the Technical Summary and the full assessment?

Proposed Consultative Process

Conducted via (1) a web site through which visitors can submit feedback on the process by responding to a questionnaire and commenting on the outputs/conclusions of the regional meetings and video-conferences, which will be placed on the web-site; (2) regional meetings throughout the world; (3) videoconferences designed to elicit input from stakeholders unable to attend regional meetings.



Proposed schedule for consultations

Consultations	Location	Date	Host
Launch process	Dublin	6-8 Nov 2002	Government of Ireland
Web site	World-wide	Continuous	*www.agassessment.org*
Videoconferences	World-wide	Dec 2002 - Mar 2003	
Regional Meetings			
Middle East/North Africa	Amman, Jordan	13-14 Dec 2002	ICARDA
Western Europe	Paris, France	Jan 2003	
West Africa	Dakar, Senegal	Jan 2003	CORAF/ROPA?
Eastern Europe	Budapest, Hungary	Jan 2003	Hungarian Academy of Science?
South America	Lima, Peru	Feb 2003	CIAT
South Asia	Delhi, India	4-5 Feb 2003	Govt of India?
East and southern Africa	Addis Ababa or Kampala	Mar 2003	Rockefeller?
East Asia	Malaysia?	Mar 2003	
Central America	Costa Rica?	Mar 2003	
North America	US or Canada	Mar 2003	
Steering committee			
Develop recommendations		May-June 2003	
International multi-stakeholder meeting			
Finalize recommendations	Washington, DC	June 2003	World Bank

Steering committee for Consultative process
Terms of Reference

Steering committee shall be constituted as follows with all due consideration for the inclusion of individuals with extensive, appropriate scientific, technical and policy expertise; effective north-south and gender balance; as well as individuals representing key stakeholder groups:

- Co-chairs (5)
- Governments (8)
- Private sector entities (3)
- Foundations (2)
- Non-governmental organizations (3)
- Consumer and farmer organizations (2)
- At-large scientists (3)
- Scientific institutions (3)
- International agencies and UN conventions (4)

1. Finalize the design of the consultative process based on discussion held in Dublin, including
   - Participants and agenda for each consultation;
     (single vs. multi-stakeholder; seniority and number of participants)
   - Location of regional meetings;
   - Location of videoconferences;
   - Website content.

2. Participation in the consultation process: a representative set of members shall be involved in each regional consultation, which will be chaired by the co-chair from the region

3. Oversight of the consultation process. The secretariat (Bank staff) will be responsible for providing feedback on the website, videoconferences, and regional meetings to the steering committee. The steering committee will be responsible for using feedback to assess sufficiency of design and to make changes as necessary.

4. Individual members shall elicit feedback on the proposed assessment process from their own stakeholder group.

5. Further refinement of steering committee functions, if needed.

6. Responsible for final recommendation on advisability of international assessment.

7. If recommendation to proceed, then steering committee will determine
   - Governance (i.e., intergovernmental or non-governmental);
   - Management, including the location of the secretariat;
   - Principles and procedures (nomination/selection process for authors and reviewers, the design and management of the peer-review process, the “broad” structure of the report and the final approval process);
   - The scope of the assessment, including key questions;
   - Timeframe of assessment;
   - A funding strategy.

Assessments: What they can and cannot do

Assessments can provide a framework for addressing policy relevant issues. They can also:

- Provide better access to information and scientific knowledge needed by parties in implementing the UN conventions related to food, agriculture, the environment and development.

- Provide better access to national ministries and departments involved in environment and sustainable development planning to new methods and models for evaluating and weighing trade-offs among agricultural systems and goods and services and better access to global datasets. This type of information is now often available primarily to the private sector and Northern governments.

- Provide the private sector with a better ability to evaluate business strategies, forecast future supply and demand, and provide a clearer understanding of what scientific information is known with confidence and what is still uncertain. In addition, they can increase the incentives and information available to guide change in private sector actions.

- Provide civil society with better access to information to hold private sector and governments accountable for decisions and enhance civil society efforts to promote sustainable development by enabling ready access to peer-reviewed data and information;

- Support regional, national, and local integrated assessments that will directly contribute to planning and capacity-building needs.

Assessments cannot and must not:

- Offer policy endorsements or prescriptions. While they do provide policy relevant information, their merit lies in rigorous reporting of what is known and not known.

- Condone political interference by any group. To be of value, assessments must be free of political manipulation.

In context: *complementary activities*

The InterAcademy Council "Food for Africa" Strategic Plan

In March 2002, the Secretary General of the United Nations, Mr. Kofi Annan, asked the InterAcademy Council (IAC) to develop a strategic plan within one year on how best to harness technology and science to improve food security in Africa. Scientists and stakeholders with vast experience and expertise in the field are developing the plan. UN agencies, such as FAO, are fully participating in the development of the plan. While the report will primarily deal with a Technological Strategic Plan for shaping Africa's agricultural future, it will address also the conditional setting for activating the use of science and technology. Specific action proposals will emphasize the role of both the public and private sector. The objective of the study is to foster food production in Africa by outlining the necessary conditions to achieve food security. The IAC report is due in May 2003.

The Hunger Task Force of the UN Millennium Development Goals Program

Early in 2002, Mr. Kofi Annan, asked Professor Jeffery Sachs to direct the UN Millennium Development Goals (MDG) Program, a program designed to meet targets such halving extreme poverty, achieving universal primary education, halting the spread of Aids and other diseases and reversing the loss of environmental resources. The UN General Assembly agreed to the MDG in September 2000. The Hunger Task Force addresses the MDG target of reducing by half between 1990 and 2015, the proportion of people who suffer from hunger. About 20 leaders from science, civil society, governments and the UN will produce and implement recommendations aimed at reducing hunger. These recommendations will be broad in scope and based on the analysis of many other groups. While Africa is the first priority, food-exporting countries such as India and China are also included. The Task Force has a 3-year time frame and a budget of $750,000.

Organizational options: inter-Governmental vs non-governmental mechanisms

Intergovernmental Process – based on the IPCC

- Broad-based government financial support
- Scope determined through consultations with civil society (including private sector, civil society, scientific community), but finalized by governments
- Plenary of governments to elect Bureau consisting of government representatives and chair(s) to provide management oversight
- Technical support office to support the preparation and peer-review of assessment report and facilitate outreach and communications
- Detailed design meeting to outline report (about one hundred experts from all stakeholder groups)
- Plenary to finalize scope in detail, approve selection of lead authors from all stakeholder groups, based on government and expert nominations, and approve principles and procedures, including peer-review process
- First-order draft prepared by hundreds of experts
- Expert peer-review of first-order draft
- Second-order draft
- Expert and government review of second-order draft
- Preparation of final assessment report
- Plenary acceptance of full assessment report and approval of Summary for Policymakers by governments
- Extensive outreach and communications throughout process

Budget estimate = US $12 million

- 3 plenaries (travel and translation)
- 1 design meeting (travel for 100)
- 4 expert meetings (travel)
- 3 Bureau meetings
- Technical support unit
- Communications and outreach

* assumes trust fund only pays for developing country experts

Non-governmental Process – based on the Millennium Ecosystem Assessment

- Broad-based multi-stakeholder financial support
- Scope determined through consultations with civil society (including private sector, civil society, scientific community) – finalized by multi-stakeholder Board of directors
- Multi-stakeholder Board of Directors with executive committee to provide management oversight, approve principles and procedures, including peer-review process select co-chairs, etc.
- Technical support office to support the preparation and peer-review of assessment report and outreach and communications
- Detailed design meeting to scope report involving about one hundred experts from all stakeholder groups
- Selection and approval of lead authors from all stakeholder groups by Board of Directors
- Expert preparation of first-order draft involving hundreds of experts
- Expert peer-review of first-order draft
- Second-order draft
- Expert and government peer-review
- Preparation of final assessment
- Approval of full assessment and Summary of Policymakers by Board of Directors
- Extensive outreach and communications throughout

Budget estimate = US $15 million

- 1 design meeting (travel for 100)
- 4 expert meetings (travel)
- 4 science panel meetings
- 3 Board meetings
- Technical support unit
- Communications and outreach

*assumes trust fund pays for all experts

Approval Process for Assessment Report

(see draft principles and procedures in Appendices)

Intergovernmental Process

Peer Review

1. Zero-order draft by experts
2. First-order draft by experts and governments

Final Approval

4. Full Assessment Report: lead authors responsible for final text (with review editors); accepted by governments
5. Technical Report: lead authors responsible for final text (with review editors); accepted by governments
6. Summary for Policymakers – governments – with authors present to ensure scientific integrity when translated into policy-relevant language

Hybrid ?

The key issues for any process are:

1. To ensure that the voices of all stakeholders are acknowledged throughout the process
2. How to ensure involvement of decision-making entities?
3. How to ensure relevance to decision makers?

Non-governmental Process

Peer Review

1. Zero-order draft by experts
2. First-order draft by experts and governments

Final Approval

1. Full Assessment Report: lead authors responsible for final text (with review editors); accepted by Board of Directors
2. Technical Report: lead authors responsible for final text (with review editors); accepted by Board of Directors
3. Summary for Policymakers: Board of Directors with authors present to ensure scientific integrity when translated into policy-relevant language

Draft Assessment Timeline
(Intergovernmental Process)*

	Number of Participants	Focus	Time (elapsed months)	Target
Plenary**	200+	To elect Bureau and chair(s) for management oversight and establish technical support unit and select participants for the design meeting	0	October 2003
*Design meeting****	100+	In-depth discussions along chapter structure and cross-cutting topics;	3	January 2003
Plenary		Finalize scope and approve selection of coordinating lead authors and lead authors, based on government and expert nominations	6	May 2004
Draft #1		Prepare first draft (9 months)	15	February 2005
		Peer review by experts (2 months)	17	April 2005
Draft #2		Prepare second draft including the TS and SPM (3 months)	20	July 2005
		Peer review by experts & governments (2 months)	22	September 2005
Draft #3		Prepare final draft including the TS and SPM (3 months)	25	December 2005
Plenary		Acceptance and approval by governments	26	January 2006
Technical support unit		Publication	28	March 2006

*The timeline would be very similar for a non-governmental process, but meetings of the Board of Directors for the Assessment would replace the plenaries.

**This timeline is success-oriented and assumes that a plenary could be arranged within 3 months of the final steering committee report

***This assumes a single meeting will be sufficient to design the structure of the assessment – success-oriented. Assumes that the broad scope of the assessment is well debated during the consultative process and articulated by the steering committee.

Draft Principles and Procedures Governing an International Assessment on Agricultural Science and Technology

I. Intergovernmental Process (*Based on the IPCC Principles and Procedures)*

Purpose

1. The International Assessment on the future role of agricultural science and technology in reducing hunger and improving livelihoods (hereinafter referred to as the IAAST, or the Assessment) shall concentrate its activities on the task of a critical review of the literature pertaining to the scope of the Assessment as defined by the Panel of participating governments.
2. The role of the IAAST will be to assess in a comprehensive, objective, open and transparent fashion the scientific, technical and socio-economic literature relevant to how agricultural science and technology can help reduce hunger and improve the livelihoods of the poor. The assessment report should be neutral with respect to policy, and deal objectively with scientific, technical and socio-economic factors relevant to the application of certain policies.
3. Peer-review by experts both in and outside of government shall be an essential part of the assessment process.

Organization

4. Governments shall make major decisions of the Assessment in plenary meetings. The governments will elect a Bureau for oversight management. The Bureau will be effectively balanced with respect to gender and geographic representation with due consideration for scientific and technical requirements.

Participation

5. Participation will be open to all World Bank, WHO, FAO, IFAD, UNEP, UNDP Member countries.
6. Invitations to participate in the plenary meetings shall be extended to governments and other bodies by the Chair of the Assessment.
7. Experts from Member countries or international, intergovernmental or non-governmental entities may be invited in their own right (personal capacity) to contribute to the preparation and peer-review of the Assessment. The Bureau will make the initial selection of authors, based on nominations from all stakeholder groups, and finally approved by the Panel. Governments shall be informed in advance of invitations extended to experts with citizenship in their countries and shall be allowed to nominate additional experts.

Procedures

8. In taking decisions, and approving, adopting and accepting the report, the Members shall use all best endeavors to reach consensus. If consensus is judged by the relevant body not possible: (a) for decisions on procedural issues, these shall be decided according to previously approved procedures by the Panel; (b) for approval, adoption and acceptance of report, differing views shall be explained and, upon request, recorded. Differing views on a matter of a scientific, technical or socio-economic document shall, as appropriate in the context, be represented in the document concerned. Differing views on matters of policy shall, as appropriate in the context, be recorded in the report of the session.
9. The Assessment report shall be made available to governments and other approved bodies by the Technical Support Unit at least four weeks in advance of the plenary for final acceptance/adoption/approval, and to the extent possible the Summary for Policymakers be distributed in all official UN languages.
10. Interpretation into all official UN languages shall be provided for all sessions of the Plenary.
11. Procedures for the preparation, review, acceptance, approval, adoption and publication of the Assessment Report are given in Appendix A.
12. Financial procedures are given in Appendix B (not included here).

Appendix A to Principles governing IIAST

Procedures for the preparation, review, acceptance, adoption, approval and publication of the Assessment Report

Introduction
This appendix to the Principles governing IAAST work contains the procedures for the preparation, review, acceptance, adoption, approval and publication of the IAAST Report and the Summary for Policy Makers

Definitions
"Acceptance" signifies that the material has not been subjected to line-by-line discussion and agreement, but represents a comprehensive, objective and balanced view of the subject matter.
"Adoption" is a process of endorsement section by section (i.e., not line-by-line).
"Approval" signifies that the material has been subjected to line-by-line discussion and agreement.
"Assessment report" is the published material of the full scientific and technical analysis.
"Members of the IIAST" are countries who are Members of the World Bank, WHO, FAO, IFAD, UNEP, UNDP.
"Session of the Bureau" refers to meetings of the elected members of the IIAST Bureau who may be accompanied by a representative of their government.
"Plenary Session" refers to meetings of the Member countries.

Review Process
The review process should take place in three stages: expert review of the Report, government/expert review, and government review of final document summary. Expert review should be approximately eight weeks, but not less than six weeks. Government and government/expert review should not be less than eight weeks. All written expert and government review comments will be made available to reviewers on request during the review process and will be retained in an open archive in a location determined by the IIAST Bureau on completion of the Report for a period of at least five years.

The purpose of the review process is to ensure that the Assessment Report presents a comprehensive, objective and balanced view. The content of the authored chapters is the responsibility of the lead authors. Only grammatical and or minor editorial changes can be made prior to publication. To ensure proper preparation and review, the following steps should be taken:

1. Compilation of lists of Coordinating Lead Authors, Lead Authors, Contributing Authors, Expert Reviewers, Review Editors and Governmental Focal Points.
2. Selection of Lead Authors.
3. Preparation of draft Report.
4. Review
   - First draft by experts
   - Second draft by governments and experts
   - Preparation of final draft Report.
5. Acceptance of Report at a session of the Plenary.

Compilation of Author and Editor Lists
At the request of the Bureau through the Technical Support Unit, governments and participating organizations should identify appropriate experts for each Chapter in the Report to act as Coordinating Lead Authors, Lead Authors, Lead Authors, Contributing Authors, expert reviewers or Review Editors. To facilitate the identification of experts and later review by governments, governments should also designate their respective Focal Points. Bureau members should contribute where necessary to ensure balanced representation from developed countries, developing countries, and countries with economies in transition. These

recommendations shall be assembled into lists available to all Members and maintained by the Technical Support Unit. The tasks and responsibilities of Coordinating Lead Authors, Lead Authors, Lead Authors, Contributing Authors, expert reviewers, Review Editors and government Focal Points are outlined in Annex 1.

Selection of Authors
Coordinating Lead Authors and Lead Authors shall be selected by the Bureau from those experts cited in the lists provided to the Bureau by governments and participating organizations. The composition of the group shall reflect the need to aim for a range of views, expertise and geographical representation. The Coordinating Lead Authors and Lead Authors selected by Bureau may enlist other experts as Contributing Authors to assist in their work.

At the earliest opportunity, the Technical Support Unit shall inform all Members and participating organizations the Coordinating Lead Authors and Lead Authors responsible for each chapter.

Preparation of Draft Report
CLAs and LAs should undertake preparation of the first draft of the Report. Experts who wish to contribute material for consideration in the first draft should submit it directly to the LAs. Contributions should be supported as far as possible with references from the peer-reviewed and internationally available literature, and with copies of any unpublished material cited. Clear indications of how to access the latter should be included.

LAs will work based on these contributions, the peer-reviewed and internationally available literature, including selected non-peer review manuscripts that can be made available for review according to Annex 2. Material that is not published may only be included if its inclusion is fully justified in the context of the Assessment process.

Review
Three general principles should govern the review process:
1. the best possible scientific and technical advice should be included so that the Report represents the latest scientific, technical and social findings and are as comprehensive as possible;
2. circulation should aim to involve as many experts as possible, with particular attention to independent experts (not involved in the preparation of the chapter) from developed countries, developing countries, and countries with economies in transition; and
3. the review should be objective, open and transparent.

First draft: The first draft should be circulated to all expert reviewers selected by the Bureau, as well as those on the lists submitted by governments and other participating organizations, noting the need to aim for a range of views, expertise, and geographical representation. It should be sent to each Member Focal Point, along with a list of those to whom the Report was sent for review in that particular country. CLAs, in consultation with the Review Editors and the Technical Support Unit, are encouraged to supplement the draft revisions process by organizing a wider meeting with principal CAs and expert reviewers, if time and funding permit, in order to pay special attention to particular points where major differences exist.

Second draft: The revised draft should be circulated through the designated Focal Points and to all CLAs, LAs, CAs and expert reviewers. Non-government expert reviewers should provide comments to the appropriate LAs with a copy to their government Focal Point. Governments should send one integrated set of comments.

Preparation of final draft
The CLAs and LAs in consultation with the Review Editors should prepare the final draft Report. Government and expert comments should be considered in this final draft. If

necessary, and if time and finances permit, a wider meeting with principal Contributing Authors and expert and government reviewers shall be encouraged in order to pay special attention to particular points of assessment or areas of major scientific difference. It is important that the Report describe different (possibly controversial) scientific, technical, and socio-economic views on a subject, particularly if they are relevant to a policy debate. The final draft should credit all Coordinating Lead Authors, Lead Authors, Contributing Authors, reviewers and Review Editors by name and affiliation at the end of the Report text.

Approval and acceptance of Summary for Policymakers

Summary sections of the Report approved and accepted by the Panel will principally comprise the Summary for Policymakers. It should be subject to simultaneous review by both experts and governments and to a final line-by-line approval by a session of the Plenary. The SPM should be prepared concurrently with the main Report.

Approval of the Summary for Policymakers signifies that it is consistent with the factual material contained in the full assessment Report. CLAs may be asked to provide technical assistance in ensuring the two documents are consistent. The Summary for Policy Makers should be formally and prominently described as: “A Report of the International Assessment on Agricultural Science and Technology.”

Annex I
Tasks and responsibilities for Lead Authors, Coordinating Lead Authors, Contributing Authors, Expert Reviewers and Review Editors of the IAAST Report and Government Focal Points

1. Lead Authors (LAs)

Function: Responsible for the production of designated sections addressing items on the work program on the basis of the best scientific and technical information available.

Comment: LAs will typically work as small groups that have the responsibility for ensuring that the various components of their sections are brought together on time, are of uniformly high quality, and conform to any overall standards of style set for the document as a whole.

The task of LAs is a demanding one and in recognition of this, the names of LAs will appear prominently in the final Report. During the final stages of Report preparation, when the workload is often particularly heavy and LAs are heavily dependent upon each other to read and edit material, and to agree to changes promptly, it is essential that the work should be accorded the highest priority.

The essence of the LAs’ task is synthesis of material drawn from available literature. LAs, in conjunction with Review Editors, are also required to take into account expert and government review comments. LAs may not necessarily write original text themselves. But they must have the proven ability to develop text that is scientifically and technically sound and that faithfully represents, to he extent that this is possible, contributions by a wide variety of experts. The ability to complete work by deadlines is critical.

LAs are required to record in the Report views that cannot be reconciled with a consensus view but that are nonetheless scientifically or technically valid. LAs may convene meetings with Contributing Authors, as appropriate, in the preparations of their sections or to discuss expert or government review comments. The names of all LAs will be acknowledged in the Report.

2. Coordinating Lead Authors (CLAs)

Function: Overall responsibility for a chapter.

Comment: CLAs will function as LAs and ensure that the Chapter of the Report for which they are responsible is completed to a high standard in a timely manner and in conformance with style requirements. CLAs will play a leading role in ensuring that any cross-cutting scientific or technical issues that may involve several chapter so a report are addressed in a complete and coherent manner and reflect the latest information available. The skills and resources required of CLAs are those required of LAs with additional organizational skills. The names of CLAs will be acknowledged in the Report.

3. Contributing Authors (CAs)

Function: Prepare technical information in the form of text, graphs, or data for assimilation by LAs.

Comment: Input from wide range of contributors will be key to the success of the Report. Contributions should be supported with references from the peer-reviewed and internationally available literature, and with copies if any unpublished material cited; clear indications as to how to access the latter should be included.

4. Expert Reviewers

Function: To comment on the accuracy and completeness of the scientific and technical content and the overall balance.

Comment: Expert reviewers will comment on the according to their own knowledge and experience. They may be nominated by Governments, regional, national and international organizations, LAs and CAs.

5. Review Editors

Function: Will assist in identifying reviewers for expert review process., ensure that all substantive expert and government review comment are afforded appropriate consideration, advise lead authors on handle contentious/controversial issues and ensure genuine controversies are adequately reflected in the text of the Report.

Comment: One or two per Chapter. In order to carry out these tasks, Review Editors will need a broad understanding of the wider scientific and technical issues. Although responsibility for the final text remains with the LAs, Review Editors will need to ensure that where significant differences of opinion remain, such differences are described in an annex to the Report.

6. Government Focal Points

Function: To prepare a list of national experts as required to implement the work program, and to arrange the provision of integrated comments on the accuracy and completeness of the scientific and/or technical content and balance.

Comment: Government review will typically be carried out within and between a number of Departments and Ministries. For administrative convenience, each government and participating organization should designate one Focal Point for all IAAST activities, provide full information on contact coordinates for this person to the IAAST Secretariat and notify the Secretariat of any changes in this information. The Focal Point should liaise with IAAST Secretariat regarding the logistics of the review process.

Annex 2
Procedures for using non-published/non-peer-reviewed sources in the IAAST Report

1. *Responsibilities of Coordinating, Lead and Contributing Authors*: Authors who wish to include information from a non-published/no-peer-reviewed source are requested to:

a. Critically assess any source. Each chapter team should review the quality and validity of the source.
b. Send one copy of each unpublished source to the CLAs, including the following information:
- Title
- Author(s)
- Name of journal or other publication in which it appears, if applicable
- Information on the availability of underlying data to public
- English-language executive summary or abstract, if source not written in English
- Names and contact information for 1-2 people who can be contacted for more information about the source.

2. *Responsibilities of Review Editors:* The Review Editors will ensure that these sources are selected and used in a consistent manner across the Report.

3. *Responsibilities of the IAAST Secretariat:* The Secretariat will store the complete sets of indexed, non-published sources and send copies to those reviewers who request them.

4. *Treatment in Report:* Non-peer-reviewed sources will be listed in the reference sections of the Report. They will be integrated with references to the peer-reviewed sources with notation stating how material can be accesses, and that material is not published.

II. Non-governmental Process (*Based on the Millennium Principles and Procedures* **)**

Because the Principles and Procedures used for the Millennium Assessment were derived from those of the IPCC, below we note only key points of difference between the two.

A. The peer review process begins with a review by governments and experts followed by a review of experts; this is the opposite of the IPCC. Government review at an earlier stage will help to shape the products so that they are as relevant as possible to the needs of the users, while the two rounds of review will maintain the technical integrity.

B. Two independent Review Board Co-Chairs (individuals not involved as a member of the Board, Panel, or Chapter Teams) are appointed and oversee (with input from the Panel and Board) the selection of Review Editors. The Review Board Co-Chairs, along with Assessment Panel play an important role in approval and acceptance of the Report and Summary for Policy Makers (SPM). In the IPCC the Review Editors are selected from list supplied by governments and other participating organizations.

C. A procedure was added that delineates options for how Conventions may decide to incorporate the Report and its findings into the work of their technical bodies.

D. A procedure was added for preparation of outreach products by the Secretariat.

E. A procedure was added for the preparation of a summary report by the Board.

F. Procedures were added to enable the validation of findings from local assessments that rely significantly on local and traditional knowledge and the inclusion of “personal communication” from individuals with indigenous, traditional, or local knowledge.

Questions concerning the consultative process and proposed international assessment

1. Proposed objectives of consultative process – have we missed any important objectives?

- Define the scope, key questions, and the principles and procedures of the assessment;
- Develop the political support of stakeholders;
- Build support among potential users;
- Develop ownership and engagement of institutions involved in agricultural issues and environment and human health;
- Engage the leading agricultural, human and animal health and social scientists in the design, preparation and peer-review processes; and
- Establish a sound multi-stakeholder financial base.

2. Have we included all the relevant stakeholder groups?

- Governments;
- Private sector;
- Civil society, including consumers, farmers, health and environmental groups;
- Scientific institutions and the scientific community;
- Foundations;
- International agencies (FAO, IFAD, UNEP, UNDP, WHO, UNESCO and OECD)
- Multi-lateral environmental conventions; and
- Development Banks (World Bank and Regional Development Banks)

3. Will the suggested consultative methods adequately involve an appropriately wide range of stakeholders?

- web site;
- video-conferences; and
- regional meetings

4. What scope and structure of the Assessment would provide the greatest value? Given the proposed international assessment's goals of:

- improving the information that drives decision-making by a wide range of stakeholders; and
- providing guidance on the most important research issues

5. What scientific, technical, institutional and policy questions do you think should be addressed? Box 2 of the paper identifies a few of the types of questions that could be addressed by an international assessment on the role of agricultural S&T in reducing hunger and improving rural livelihoods.

6. What management and oversight structure — inter-government, non-governmental or a hybrid — would best ensure that the assessment process is credible, objective, open, transparent and technically credible and endow the stakeholders with full ownership of the assessment process and its final products?

Views from the web site

Question 1: Are there other issues that should be covered in consultative process besides the six objectives mentioned on page 9 of the concept paper?

Respondents thus far have been evenly divided as to whether these objectives are sufficient. Some of the comments from those who answered "yes" are below.

The consultative process balance must be defined to adequately reflect an appropriate balance between all relevant stakeholders. There is a real risk that the process will be captured by organizations with agendas instead of widely representative views of technology beneficiaries. For example, farm families (gender issue) and consumers (including the landless) must be included.

Essential to define a beneficiary consultation methodology that is not biased against poor people and that can reach individual representative households, especially poor people.

I do not see how you will include local sustainable agriculture groups, nor local impoverished groups without funds and technology to participate. These dominant groups are both the problem and solutions.

Change institutions to "NGOs" in fourth objective: Developing ownership and engagement of NGOs and the private sector involved in agricultural issues and environment and human health.

Establishing a sound multi-stakeholder financial base' - What does this actually mean? Most stakeholder have a very 'small or no' financial base to invest in any project, particularly in an international project like this. How will the political support for stakeholders be developed? Who determines which stakeholder groups are going to be involved, and would these groups be also involved in 'setting the scientific and technical standards' (mentioned on page 3) Those questions have to be answered before any such assessment process begins!

An impartial process needs to be established to ensure as many relevant stakeholders as possible are identified, engaged and have adequate information on both the consultation process and the issues / topics they are being consulted on. For example, it is essential that a process is established to ensure that:
(a) the multi-stakeholder regional meetings are especially accessible to those without web access to the on-line consultation.
(b) potential participants are aware (i) that the consultation and meetings are taking place (ii) of the relevance and importance of the consultation to them (iii) of the potential benefits of being involved.

Will depend on how the first of the six broad objectives is being filled in

Question 2: Relevant stakeholder groups included? If not, who?

Question 3: Will suggested consultative methods be adequate to involve all stakeholders?

Since these questions are similar we have grouped the responses. Nearly all respondents, thus far, have answered “no” to both questions. Comments and suggestions are below.

1. *University researchers*
2. *Religious communities*
3. *Technical expertise*
4. *Nutrition community*
5. *Public health community*
6. *Farmers, including farmwomen*
7. *Agricultural workers should be recognized as a distinct stakeholder group from farmers. It will be difficult, but necessary to recognise the intra-group heterogeneity of 'farmers' as a stakeholder group, for example, the contrasting perspectives of large-scale farmers vs. resource deficient, small scale farmers / farming communities.*

There is little hope of getting representative feedback from farmers or consumers unless there is active (as opposed to passive) seeking out of a wide sample of views in the field following a formal beneficiary assessment approach. These clients of research, especially the poorest are unlikely to show up at regional meetings, other than the local elite. The process will be captured by organizations with their own agendas not representative individuals and the poorest.

In due course there would need to be representation from farmers, the landless, urban consumers, researchers both national international and private, input suppliers, marketing bodies, and professional associations such as foresters, irrigation specialists, social scientists, home-garden specialists, nutritionists, etc. It is very important that strong technical specialization be represented. The biggest risk is lack of credibility due to lack of top quality technical input.

You should be more specific in identifying truly independent scientists as opposed to those with vested interests in other stakeholder groups like companies or NGOs. This means independent (non company/NGO funded university scientists) who can really speak out freely in this important and possibly contentious debate.

Representatives of ordinary people such as me who are concerned about the environmental and health risks from GM food and who are routinely ignored by large organizations like the World Bank.

Small-scale farmers represent a large part of the stakeholders in the developing countries. Who is to represent them? Their governments – who (at least in Latin America) for the most part favor plantations and large-scale farming? NGOs? In the case of those from the developed world, one has to be certain that they do not come with their agendas. Considering their lack of resources, I doubt that web sites and video - conferences will reach them.

No -- I do not know the final answer to that until we know which stakeholder groups have been selected to participate. Who are the major contact person(s), groups or institutions in the different regions and/or countries, like Canada?

Question 4: Do you think assessment will be of value?

About two-thirds of the respondents have answered, “yes.” Comments below:

The main problem here is not agricultural production to feed the world. People that die of hunger are so poor they cannot afford to buy any food and people will not give the food free. Nowadays some countries would

burn the over production so the prices will not go down. It is more a political and corruption problem. On the other hand, rich countries are not interested in helping the poor ones; they are interested in becoming richer.

I believe capacity building is key here. I am both a trainer at tertiary level and a rural development specialist. Now that agricultural research has moved from the public domain into the private sector, it is important to empower local scientists with information that they can use to advise their governments. They cannot stand up to support biotechnology or any other technology when they are not properly informed. I feel western scientists have gone about it the wrong way...it is as if there was something to hide.

No – your paper identifies the main cause of hunger (p.4).

To what extent is a new assessment needed on the underlying causes of nutritional insecurity / degradation and the barriers to alleviating hunger...when there are already many ongoing relevant activities (for example those listed on www.agassessment.org/activities/index.html)?

To what extent will preparation for the assessment encompass a consolidation of research already conducted?

Question 5: What other broad questions should be addressed?

Access: The main problem in feeding the world is not agricultural production. People that die of hunger are so poor they cannot afford to buy any food and people will not give the food free. Nowadays some countries would burn the over production so the prices will not go down. Hunger is more a political and corruption problem. On the other hand, rich countries are not interested in helping the poor ones; they are interested in becoming richer.

In Box 2, there is a strong bias toward "modern" technologies and topics, i.e., biotech, fertilizers and so on. Instead, suggest need for deeper studies on local methodologies that result in stable systems and that are coevolved with the environment. Traditional techniques could be valuable once their rationale is understood. R&T, unfortunately, is a process too often driven by market. Pro poor R&T should concentrate more on food security and less on production. Maybe the questions are too broad hence leading only to general statements.

The questions are very relevant and all encompassing.

Need to know how to improve the efficiency of research in NARS. Currently there is far too much money wasted on research stations and buildings instead of productive research. (ICIs' 1960/70s private sector research and development program in NSW, Australia on minimum tillage used a field team with no research station at all, no secretaries, no houses, nothing except salaries and good transport. Private laboratories were used. All experiments had to be done on farmers' fields. Result? Extremely low cost and rapidly applicable results that took off over 10 years and are now standard farming practice. Never calculated but almost certainly massive net benefits.)

How can agricultural systems be improved to provide all essential nutrients in balance to meet the needs of target populations in sustainable ways?

How can close linkages be formed between the agriculture sector and the human nutrition and health sectors to address sustainable solutions to malnutrition?

It appears in this document that some form of market is assumed. Local food production with local cultivars as a primary food source depending on local labor and water resources reduces risk by redeveloping local ecological and social resources. By lowering market dependency, this approach not requiring currency is lower risk robust. Then, risk management can be implemented as a supplemental supply for local crop failures. The industrial agriculture model is inappropriate, as we see in Africa, India, etc. where populations are large and generally poor. That is a fact, and this conceptual approach does not mean a longer-range implementation of broader market based agriculture when economic conditions are more equalized and strong. This economic transition should NOT be fueled by food, air, water and living arrangements based on global markets. The role of traditional knowledge is very important for local sustainability and low or moderate risk. The assumption seems to be that the research of the past is relevant for solutions, but it is more closely associated with the production of the problem itself. A general refocusing is extremely important. Policies naturally favor some options, and disfavor others. This plan is 180-degrees out of line.

What role should milk, meat and eggs play in reducing hunger and/or achieving a balanced diet? What impacts will that have on livestock production and what feed ingredient supplies would be needed to achieve these increases?

Can phosphorus inputs be reduced? If not, what are the environmental consequences?

Given its narrow focus and IPR encumbrances, what, if any, role(s) does the existing GM technology have in addressing issues of world hunger? How do we address the skepticism of many developing countries as well as many in Europe and elsewhere, about the need for & desirability of GM technology for food improvement?

It is very important to demonstrate where else in the West these technologies are used. The myth that developing countries are being used as guinea pigs should be dispelled. In addition, at the end of the day, developing countries want to be assured of fair play at the international level. Yes, they want to ensure local food security, but at the same time, they want to be assured of market access internationally.

Is the food distribution system adequate to make sure that food producers are adequately paid for their cost of production, have the access to markets, are not curbed by monopolies in the input and distribution system, that consumers' rights to choice of food and access to locally grown food is protected? Who will produce the food? Will farmers have access to enough land, water, and good climatic conditions? Will farmers have access to affordable seeds and other inputs? Will each nation have the ability to protect and support their farmers' viability?

The role of the biotech companies in promoting GM foods where there is little demand for them (e.g., in Europe), particularly the uses of regulatory capture to achieve this aim. One of the biggest concerns of ordinary people is that regulatory bodies advising on the safety of GM foods are not independent, but are overly influenced by membership structures containing a preponderance of scientists funded, directly or indirectly, by the biotech companies.

I guess that consideration of the negative effects on third world agriculture caused by the dumping of subsidized food and other agricultural products will be included in points 1 or 2, but I would prefer to see them explicitly mentioned.

Who actually sets the research agenda? Normally governments set it with very little or no stakeholder or grassroots input. That in turn will determine how the 'ownerships' will work, there has to be a sound representational balance between all stakeholder groups!

What results have been achieved in the so-called agro-ecological transformation in the past 10-15 years?

Question 6: Auspices and governance: Government vs non-government?

Auspices: UN-WHO. However, it will not matter who when the outcome favors some biotechnology the few (very loud) extreme "environmental groups" will condemn the process and results anyway.

Non-governmental and one that would involve the academic community worldwide. In the U.S., the Cooperative Extension system has been working within the agricultural research and transfer arena as well as the rural community for nearly 100 years. Such a group could help with the discussion in the U.S.

A substantial role in management for farmer and consumer associations.

Management structure would need to focus in transparent manner on four fundamental topics and ensure relevant expertise is available. These topics are: soil management, crop production, animal production (including animal feed production), and protection of the environment. These different topics will be of interest to various, but probably different stakeholders.

An independent broadly based commission that includes key stakeholder groups and carries the appropriate authority - e.g., via the technical expertise and/or societal standing of its members. The commission would have a secretariat for administrative functions. Specialist sub committees (or whatever you wish to call them) would focus on individual issues and/or specific geographical areas and would report to secretariat.

Let the people themselves suggest how they wish to be represented. Outside of that however, it is important to select Africans (in this case Africa) who know how things play out on the international scene, and who can remain in the process as it moves on. GAIN has a management structure which sounds very good. Maybe reference should be made to it.

Participatory democratic process from grassroots (rural communities) to top levels of decision-making process.

Inclusion of grass roots groups that more accurately reflect public concerns about GM foods. In Scotland, for example, these could include Fife Against GMOs, Highlands and Islands GM Concern, the Munlochy Vigil etc.

That depends entirely how each process is organized and structured within each country. Please let me know who, for example, will be the major contact or leading group for Canada.

More potential questions for an assessment

The following are some of the suggestions we have received in addition to those contained in the concept paper.

Technology transfer

Are technologies more easily transferred when they are scale-neutral?

Nutritional security and health

Would more investment in research and development on indigenous vegetables have a significant impact on both food security and health in sub-Saharan Africa?

Environment

What are the trade-offs between immediate subsistence needs of farmers and pastoralists and long-term environmental sustainability?

Are there conditions, such as training in sustainable harvesting, which can enable subsistence farmers to utilize habitats in danger without inflicting further harm?

Under what conditions does increased expenditure on chemical pest treatments lead to improved harvests without adverse environmental and human health consequences?

Is agricultural production enhanced when farmers are trained in pest ecology?

Biotechnology

What are the social and economic impacts of crop modification? How does one assess the economic impact of job loss due to crop efficiency measures? This may be similar to industry efficiency measures, but we know that these have not been well assessed given the popularity of privatization. The impact could be labor in the ag sector, given the number of marginal wage workers who depend on ag for their livelihoods.

What will the overall economic impact be of crop modification? It may lead to job loss (bad), but will also likely lead to more food (good), thus freeing up labor for other pursuits (good or bad depending on whether the opportunities are there for people skilled mainly in ag, and whether increased food supplies result in higher incomes and thus more money to put toward school or vocational training). With regard to the latter, there are the short-term consequences (possible job displacement of those with no other skills) and long-term consequences (their kids will learn other skills and hence may have other, potentially more marketable skills when they come of age--again, if the opportunities are there).

When we ask who "bears the risks of new technologies," are we asking this question in the legal sense? This is certainly an issue in the invasive species debate where different theories of liability are debated among import export sectors. The issue is the same in the biosafety context, and it leads us to ask, "What is the role of the insurance industry?" What is the role when the impact occurs in the global commons? Some of these questions, and others are being asked during the process of looking into a liability protocol for Cartagena.

Trends

What are the major technological and policy trends, and developing country interests *vis-à-vis* those trends?

Markets

What is the relative importance of intellectual property rights to market access in particular sectors?

What technology applications may be used to increase the supply capacity in tradable goods, including the development of non-traditional exports?

How do prospective standards, environmental health, etc., effect trade flows and market access?

When are the factors that a small farmer should consider when deciding how much land to allocate, if any, to cash crops?

What are the factors that can help a nation determine whether priority should be given to high or lower potential agricultural areas?

Are parastatals still important components in developing country food markets?

Livelihoods

What impact do alternative agricultural growth and technology strategies have on livelihoods?

Should governments invest in infrastructure, and concentrate on creating an enabling environment, leaving farmers themselves to invest in farming?

How can we ensure that the agricultural work undertaken by rural women receives appropriate recognition and increases their involvement in decision-making?

What are the economic and social impacts of seasonal agribusiness, such as the harvesting of fruits, on rural women?

To what extent can farmers' food security and income be improved by introducing simple low cost pest management techniques?