

**ETC GROUP EXTERNAL REVIEW
*REPORT***

Presented to

ETC Group and the Swedish International Biodiversity Programme

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1. Executive Summary

Between early November 2004 and mid-April 2005, the three-member review panel undertook interviews with 110 individuals from South and North Civil Society Organizations (CSOs), scientific institutions, governments (South and North), the private sector, and secretariat members of United Nations agencies. Panel members also visited the four ETC Group offices in Ottawa, Carrboro, Mexico City, and Oxford and talked with staff, board representatives, and donor organizations. The panel had the opportunity to observe ETC staff giving seminars, participating in meetings, and lobbying at intergovernmental meetings. The panel also reviewed historic and current ETC Group communiqués and studies. Although the panel's investigations were wide-ranging, its intent was to develop an overview of the work and worth of the Group and to make general recommendations regarding its future activities and organization. Thus, while wide-ranging, the review process was not in-depth. With this caveat, the review panel has no hesitation in presenting its response to the questions laid out for it in the Terms of Reference agreed.

Conclusion:

ETC Group enjoys an extraordinary reputation among South civil society organizations and governments as a highly-effective and cost-efficient source of research and analysis on the socio-economic impact of new technologies impacting developing countries. ETC Group is widely-respected by governments, intergovernmental agencies, scientists and social movements for its political acumen and research accuracy. Its partners consider ETC to be innovative, far-sighted and valuable. ETC's unique style and stance often makes it controversial and the organization has its detractors, particularly in the private sector and among some industrialized governments but the review panel – despite its own diversity of viewpoints – has no hesitation in warmly commending ETC Group to its donors and partners for continuing and strengthened support.

Performance:

Mission:

Is ETC's mission relevant?

Yes. No person among those interviewed suggested that ETC Group's mission is irrelevant. The CSO and media response to ETC suggests that society, in general, and developing countries in particular find ETC's focus important. The review panel agrees with many of those interviewed who believe that ETC's role is of increasing importance in a world of rapid technological and political change.

Has ETC's choice of issues been appropriate and its predictions and analysis accurate?

Yes – in general. Both those interviewed and the review panel agree that ETC's choice of issues has been appropriate. A few of those interviewed regret that ETC Group does not work with additional issues. While some sectors would challenge ETC Group's analysis of their issues, the substantial majority and, in particular, South governments and CSOs, appreciate ETC's research and analysis and have found it accurate. The panel's own observations suggest that ETC has sometimes been remarkably accurate in predicting trends in intellectual property and biotechnology.

Does ETC provide useful services to civil society organizations and social movements in Africa, Asia, and Latin America?

Yes. All persons interviewed from South governments and CSOs expressed their appreciation for ETC research and analysis and stated that, even if they did not entirely agree with ETC's political strategies or conclusions, they found ETC's contribution important and often relied upon it.

External Review – ETC Group

Does ETC Group influence policies or debate at the national, regional or international levels?

Yes – in general. The review panel found substantial evidence and consensus regarding the Group's influence with respect to plant genetic resources and agricultural biodiversity at the national and international level. Most parties agree that ETC Group has been influential with respect to intellectual property issues and, most recently, in examining nano-scale technologies. The panel notes, however, the difficulty of measuring policy influence either nationally or internationally in fields such as human genomics and nanotechnology which are new to governments and civil society and which are introduced by ETC. There is wide recognition among those interviewed that ETC plays an important role in bringing forward new issues that should be the concern of national and international institutions and CSOs.

Does ETC Group play a role that is unique or does it duplicate efforts of other organizations?

Yes and no. ETC Group's work is unique in some areas and complementary in others. The review panel and interviewees agree that ETC has made a pioneering contribution in plant genetic resources, agricultural biodiversity, intellectual property, biotechnology and nanotechnology. With respect to plant genetic resources, biotechnology, and intellectual property, ETC is now one among several international CSO actors. Nevertheless, none of those interviewed suggested that ETC is redundant or should withdraw from these areas. Some interviewees do think that CSOs would benefit by increased collaboration, but responsibility for improving collaboration does not rest with ETC Group more than with any other party. Some in UN secretariats expressed concern that ETC's widened agenda should not take it away from its contribution in its conventional fields.

Programme:

Given its mission have ETC's programme activities (research, writing, seminars, lobbying) been appropriate? Have ETC's tactics been appropriate?

Yes – in general. Among those interviewed in the private sector and in some governments, concerns were expressed that ETC is too combative, uncompromising, and polemical. Many others in the South and in civil society find ETC's style and tactics appropriate and necessary. Within the review panel there is some difference of opinion. At least one panellist can think of occasions where a less-combative approach might have achieved greater success, and suggests a more proactive search for cooperation with the scientific sector. Another panellist disagrees and finds ETC's approach generally appropriate.

Has ETC been effective/successful?

Yes – maybe. In general, the panel and those interviewed concur that ETC Group appears remarkably effective in work it undertakes. However, the panel finds it difficult to judge "success". Many issues require decades before it is possible to judge whether or not strategies and tactics have been appropriate and the results have been beneficial. Hindsight also makes it possible to argue that alternative approaches might have led to greater success. Historically and currently, ETC's work has been to identify issues that are over the horizon and to devise strategies that bring these issues to the attention of governments and the media as well as CSOs. To this extent, ETC has been very successful.

What has been ETC's impact?

It is difficult for the panel to judge ETC impact and appropriateness in every field. The panel believes that ETC has had a highly significant impact in the area of genetic resources, genomics and biotechnology, while it is still too soon to assess its impact on nanotech. Panel members disagree among themselves regarding the impact of ETC's activities with respect to Farmers Rights and there may also be some disagreement about ETC's political strategy related to CGIAR. Nevertheless, it is difficult for the panel to second-guess ETC's ongoing work in either of these areas. CSOs interviewed by the panel regard ETC to be a consistent and reliable partner.

External Review – ETC Group

Does ETC spread itself too thinly in terms of the issues it addresses?

No – maybe. Conventional wisdom would argue that ETC's size requires it to focus down on one or two issues. Despite this, the panel concludes that ETC's size is roughly appropriate although it requires additional financial security and support – and that its programme scope is also roughly appropriate. At its current size, ETC depends upon multiplier effects through partnerships. Given its topics, the Group's ability to attract partners (or, additional CSO activity) is an indicator of its usefulness. Because it takes a pioneering role in addressing new issues, funders and friends must assess ETC's track record as they evaluate the appropriateness of taking onboard ETC's latest issues. While this creates an uncomfortable situation for ETC, it is very effective for South partners. Donors, however, should also assess ETC's exceptional track record and be prepared to support its new areas of investigation based upon this record.

Does ETC work at appropriate levels in appropriate ways? Is ETC too focused at the global level? Is it too focused on UN institutions? Are its contacts with rural and indigenous peoples and other marginalized or disadvantaged groups effective?

Yes and no. Overwhelmingly, South governments and CSOs appreciate ETC's reliable research and analysis. Although some CSOs are very sceptical of global level activities – particularly at the United Nations, they acknowledge that ETC may obtain some of its information and analysis through its contacts at this level. Some others welcome ETC's global interventions. Indigenous peoples, farmers, and others in the South strongly appreciate ETC's research and analysis in areas of specific concern to them. Some partners would undoubtedly welcome greater ETC involvement in their areas – but none are specifically critical of ETC's work in any area.

Does ETC deal with issues in a reasonable and balanced way or unnecessarily adversarial? Not adversarial enough?

In general – yes. The review panel and the substantial majority of those interviewed find ETC to be a reasonable and effective negotiator. Some, in North governments and the private sector, find ETC's media-oriented language and style difficult and suggests that ETC could be more effective if it developed a more cooperative approach. South governments and CSOs in general feel ETC's approach to be both appropriate and effective. Some respondents South and North appreciate ETC's willingness to dialogue publicly and privately.

Organization:

Has ETC been coherent and consistent? Have its tactics/actions been appropriate to its programmes and analysis and have these been appropriate to its mission?

Yes. The panel notes, in particular, that ETC began working on plant genetic resources almost 30 years ago and that its message and activities have been consistent throughout this time and that it continues to work in this field despite a broadened agenda. Although some might disagree with ETC's message and activities, its position and policies appear to have been consistent in each programme area.

Given current levels of funding and resources, does ETC work efficiently?

Yes. The panel is unanimous in recognizing ETC's remarkable cost-effectiveness and efficiency. Many of those interviewed comment favorably on this point. ETC has a reputation for being small and highly strategic in how it uses its time and resources.

Does ETC have appropriate human resources to manage its mandate? Is staff located appropriately?

More or less. The panel unanimously agrees that ETC should not become much bigger than it is. There may be some small need to increase administrative support for its programme staff. The staff seem content and enthusiastic about their work and their work environment. As funding and opportunity arise, ETC may wish to consider establishing regional offices in Africa and Asia.

External Review – ETC Group

Is the methodology of being centralized in the north effective?

The panel did not specifically address this point during the review. No interviewee indicated any quarrel with ETC being concentrated in the North.

Is ETC's internal communication effective?

Yes. Although ETC staff are spread over four offices in four countries, they are in constant contact by computer-telephone and e-mail and all staff members express satisfaction with the speed and effectiveness of communication. ETC's small size makes it possible for the organization to be responsive to changing situations.

Recommendations:

The review panel is unanimous in stating that ETC Group is a highly-effective and cost-efficient organization whose information, analysis and strategies are highly-valued by its South partners and governments and highly-respected (if not always appreciated) by other parties. ETC's mandate, programme, and size are approximately correct for its work. However, ETC would benefit possibly from a modest increase in administrative support and may wish to consider a modest expansion to increase its effectiveness in Africa and Asia. ETC could possibly increase its effectiveness through a series of co-sponsored seminars with CSO partners to develop common strategies on some issues. Reviewers reached no agreement regarding possible forms of cooperation with scientists. Donors should recognize ETC's remarkable track record and effectiveness and provided increased long-term core support. ETC should review its long-term personnel situation and also broaden its donor base.

The review panel appreciates the opportunity to undertake this review of a unique and remarkable organization. The panel also wishes to thank ETC's staff and board, Swedbio, and those who were interviewed for their cooperation.

2. Introduction – The External Review

2.1 Charge to reviewers

“To review ETC Group’s mission statement and programme commenting on the appropriateness of the mission statement and the relevance of the programme to the mission.

- To offer an overview of the historic programme activities of the Group since its 1977 origins and to comment on the value and effectiveness of the organization.
- To particularly review ETC’s programme since September 1st, 2001 in view of its broadened programme activities.
- To provide an overview of ETC’s organizational structure and style commenting on its appropriateness in light of ETC’s mission and programmes.
- To offer any other comments or recommendations the panel as either a group or as individuals view as helpful and appropriate.”

The full commissioning document is set out in the appendix.

2.2 How the Review was conducted.

Reviewers with widely differing backgrounds were selected for some prior knowledge of ETC, and for having sympathy with some at least of ETC's objectives. Reviewers have spoken with ETC staff and board, and visited all four ETC offices. They have taken part in public meetings attended by ETC staff members. They have interviewed (mostly by telephone) numerous ETC contacts from a variety of backgrounds, including Southern and Northern NGOs, donors, academia, think-tanks, and industry (though most industry representatives approached have been reluctant to take part). They have consulted with each other and reached their conclusions by phone conference and email.

We are extremely grateful to all those who agreed to be interviewed. The report quotes a number of statements by interviewees. Unless the contrary is specifically stated, these are not verbatim, but paraphrases (interviews were not recorded, and none of the interviewers have shorthand). This is one reason why such quotations are generally not attributed - others include the unwillingness of some to be quoted by name, and the sheer volume of checking and approval that would otherwise have been necessary. Our sincere apologies to anyone whose views may have been misrepresented.

3. ETC – Who is ETC and what is its mission?

ETC is a small non-governmental organization (NGO) or civil society organization (CSO) that seeks to make the world better. ETC changed its name from RAFI (Rural Advancement Foundation International) in October 2001. The full official name¹ is *Action Group on Erosion, Technology and Concentration*. The following Extract from the Group's Biennial Report (August 2003) explains this name and indicates the group's fundamental concerns.

¹ From the records of the Canada Corporations Office, reference Corporation #2911477 BN #133247676RC0001.

“ETC Group is dedicated to the conservation and sustainable advancement of cultural and ecological diversity and human rights. To this end, ETC Group supports socially responsible developments of technologies useful to the poor and marginalized and it addresses international governance issues and corporate power.

Erosion refers to not only genetic erosion and the erosion of species, ecosystems, and the atmosphere – but also the loss of cultures, knowledge and Human Rights. We are losing both our diversity and our and our eco-specific understanding of it.

Technology refers to a Pandora's Box of techniques including biotechnology, nanotechnology, informatics and neurosciences. Without societal governance, these new tools – especially in their convergence – will become a technological tsunami that could swamp the poor.

Concentration describes the global convergence of major corporations and governments driven by the desire to manage and control markets and new technological waves. ”

4. History and Record – What has ETC done?

4.1 Preamble

Initially, the organization was almost entirely concerned with Plant Genetic Resources (PGR). The campaign on PGR is central to the evolution of ETC. It started its three founders on a path that has found expression in its mission statement, quoted in the previous paragraph. As time has gone by, this concern has evolved to include biotechnology, human genetic diversity, and most recently, nano-scale technologies.

ETC is particularly concerned about the expanded reach of wealth and capital that are concentrated in the hands of fewer and fewer giant international corporations exploiting scientific developments for their own purposes. Through its action it seeks to raise public awareness and countervailing power of society, especially where it concerns food security and the livelihood systems of the poor. Considering the small size of ETC, it has been amazingly effective in communicating its views and getting international recognition for its concerns. It has been smart, low-cost and visionary in highlighting major issues that have impacted on the global policy environment. Hence there is no doubt in the view of the review team that ETC has played and continues to play a major and important role.

4.2 Organizational History

1977 – Pat Mooney and Cary Fowler begin working on the “seeds campaign” by organizing an international workshop for food researchers in Saskatchewan, Canada in November 1977. The workshop is sponsored by ICDA (International Coalition for Development Action). Pat works for ICDA.

1978 – Cary Fowler joins Rural Advancement Fund of the National Sharecroppers Fund (RAF/NSF) in rural North Carolina to work on seeds and problem of loss of genetic diversity in agriculture.

1979 – Hope Shand joins Cary at RAF/NSF in North Carolina.

1982 – Pat and Cary come in contact with the Dag Hammarskjöld Foundation and, most especially, Sven Hamrell, whose mentorship and support does much to strengthen RAFI credibility among governments and CSOs around the world.

1984 – Pat and Beverly Cross leave the ICDA Seeds Campaign to join Cary and Hope in the newly-formed RAFI with an independent international board of trustees. (Henk Hobbelink is invited by ICDA to take over the campaign that later becomes GRAIN).

External Review – ETC Group

RAFI is formally incorporated in The Netherlands one year later with Sven Hamrell as Chair.

1990 – Senior staff members of RAF/NSF form a new, tax-exempt organization, RAFI-USA. RAFI (International) continues to operate with its own independent, international board and incorporation.

1993 – Canadian-based affiliate of RAFI incorporates as an independent, charitable organization in Canada.

October 1999 – Silvia Ribeiro joins RAFI staff and sets up office in Mexico.

2001 – RAFI changes its name and becomes **ETC Group** – Action Group on Erosion, Technology and Concentration.

February 2001 – Kathy Jo Wetter begins working with Hope in the North Carolina office.

June 2001 – Veronica Villa joins RAFI's Mexico office.

April 2002 – Charlie Shymko joins ETC² in Winnipeg taking over from Bev Cross who moves to Australia to marry a dairy farmer.

December 2002 – Jim Thomas joins ETC and sets up office in Oxford, UK

4.3 Programme Highlights and Historical Context

1979 – Cary Fowler writes *The Graham Center Seed Directory* offering the first summary of the political issues surrounding the loss of traditional seeds.

1979 – Pat's first book, *Seeds of the Earth*, published (eventually) in seven languages. Offers first critical perspective on the geo-politics of plant genetic erosion, Plant Breeders' Rights, and corporate mergers leading to the control of seeds and agrochemicals, with its origins in the Green Revolution.

1979 – Cary, Pat and Hope campaign against amendments to plant breeders' rights legislation in Washington, DC.

1980 – RAF/NSF joins Friend of the Court brief filed by Jeremy Rifkin, *Diamond v. Chakrabarty* (in which it is argued that Chakrabarty did not have right to patent monopoly on oil-eating microbe). Chakrabarty won. The US Supreme Court decision opened the floodgates to the patenting of all life forms.

1981 – Cary, Hope and Pat spearhead the first, concerted civil society lobbying activities on plant genetic resources at an intergovernmental meeting at FAO in Rome.

² ETC Group changed its name from Rural Advancement Foundation International (RAFI) in the fall of 2001. For the sake of consistency, the remainder of this report refers to the organization as ETC regardless of date.

External Review – ETC Group

1983 – FAO establishes Commission on Plant Genetic Resources as the first inter-governmental forum where countries can meet, on an equal footing, to discuss matters related to PGR.

1983 – International Undertaking on Plant Genetic Resources adopted by FAO as a non-binding agreement to promote the conservation, exchange, and utilization of PGR for food and agriculture.

1983 – Pat’s book, *The Law of the Seed*, published by Dag Hammarskjöld Foundation

1984 – ETC edits the first issue of the ATAS Bulletin (journal of the UN Center on Science and Technology for Development) – a special issue on biotechnology.

1985 – ETC publishes *The Community Seed Bank Kit*, with the support of Inter Pares and USC. The kit explains the political and social aspects of seed conservation, and provides practical ideas on how to conserve seeds at the community level. It is probably the first publication to practically discuss the role of farmers as seed curators. It is translated to French and Spanish in the following years.

1985 – ETC proposes Farmers’ Rights at the first meeting of FAO’s Commission on Plant Genetic Resources. FAO Conference formally adopts Farmers’ Rights in 1989.

1985 – Pat and Cary receive the Right Livelihood Award in the Swedish Parliament for their work on plant genetic resources.

1986 – Uruguay Round of GATT begins with Trade-Related Intellectual Property (TRIPs) on the table.

1986 – Hope researches and writes the first *ETC Communiqué*.

1987 – ETC co-hosts with the Dag Hammarskjöld Foundation, the first, international civil society meeting on social and economic impacts of biotechnology in Bogève, France.

1988 – Dag Hammarskjöld Foundation and ETC publish *The Laws of Life: Another Development and the New Biotechnologies*, the first major analysis of biotechnology from the international CSO community.

1988 – ETC hosts, with CSO partners, three regional workshops on plant genetic resources and biotechnology, in Ethiopia, Chile and The Philippines.

1988 – Keystone International Dialogue on PGR holds first plenary session. Participants include representatives from NGOs, industry, government and scientists. ETC serves on the coordinating committee until the completion of the dialogue in 1991.

1990 – Pat and Cary’s book, *Shattering: Food, Politics and the Loss of Genetic Diversity* published.

1993 – ETC coins the term “**biopiracy**.”

External Review – ETC Group

1993 – The Community Biodiversity Development and Conservation Project (CBDC) is launched to evaluate and improve community-based germplasm conservation and enhancement. As a member of the CBDC, ETC takes on a special policy role.

May 1993 – ETC warns that Human Genome Diversity Project aims to collect human DNA samples from 722 indigenous communities worldwide

June 1993 – ETC exposes Agracetus' broad patent on all genetically engineered cotton varieties. (Agracetus is later acquired by Monsanto). Based on ETC information, India revokes patent.

July 1993 – ETC discovers a patent claim by the US Secretary of Commerce on the cell line of a 26-year old Guaymi indigenous woman from Panama. With ETC's assistance, the Guaymi General Congress and the World Council of Indigenous Peoples protest the patent claim and take their concerns to a UN meeting in Geneva. The US government abandoned its patent claim on the Guaymi cell line in November 1993.

October 1993 – ETC is invited to join the CGIAR Stripe Review on Plant Genetic Resources that, early in 1994, recommends that the CGIAR gene banks be placed under the auspices of – and policy control of – the FAO Commission on Genetic Resources.

December 1993 – The Convention on Biological Diversity, signed by 150+ nations at the 1992 Earth Summit, enters into force.

1994 – GATT enters into force. Signatory states obligated to develop intellectual property system for plant varieties and microbials.

March 1994 – Species-wide patent on all genetically modified soybeans issued to Agracetus (later acquired by Monsanto). In December 1994 ETC announces that it has filed legal challenge to the patent at EPO.

May 1994 – ETC receives a letter from the Chair of the CGIAR stating that it might be “foolhardy” for CGIAR to place its gene banks under FAO auspices. Taking the letter to the final preparatory meeting of the intergovernmental body for the Convention on Biological Diversity, ETC wins intergovernmental support for placing the banks under FAO. CGIAR agrees to make the legal arrangements by October.

1994 – With major input from ETC, The Crucible Group publishes non-consensus report, *People, Plants and Patents* on impact of IP on biodiversity, conservation, trade and rural society.

September 1994 – ETC authors independent study for UNDP, “Conserving Indigenous Knowledge: Integrating Two Systems of Innovation.” As follow-up, ETC Group participated in three regional workshops on strategies to protect indigenous peoples from biopiracy, hosted by indigenous peoples and CSOs in Santa Cruz, Bolivia (September 1994), East Malaysia (February 1995) and Fiji (April 1995).

October 1994 – CGIAR and FAO sign an agreement to place the international plant genetic resources collections housed in the CGIAR genebanks under the auspices of the FAO's Global System.

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March 1995 – US PTO issues patent to US National Institutes of Health for an unmodified human cell line from indigenous person from Papua New Guinea. ETC launches protest campaign with indigenous peoples and civil society. Due to the international controversy, the US government is forced to disclaim the patent in December 1996.

May 1995 – ETC publishes “Gene Hunters in Search of Disease Genes” – human DNA sampling in remote island nations for patenting and profits.

June 1996 – ETC plays major role with CSO partners at Fourth International Technical Conference on PGR in Germany.

1996 – ETC Group begins its first annual update on the “life industry” – the multinational corporations that control seeds, agrochemicals, drug industry, human gene boutiques, biotech, food retailers, etc.

1996 – World Food Summit, Rome.

October 1997 – US National Research Council rejects funding for the Human Genome Diversity Project due to widespread controversy and campaigning by indigenous peoples and civil society.

October 1997 – ETC is invited to become a member of the scientific panel for the third System-wide External Review of the CGIAR under the Chairmanship of Maurice Strong.

December 1997 – FAO publishes *Human/Nature* by Hope Shand.

February 1998 – FAO and CGIAR call for patent moratorium on seeds held in FAO/CGIAR Trust in response to biopiracy scandal uncovered by ETC and Australian Heritage Seed Curators Association.

March 1998 – ETC Group discovers patent on genetic seed sterilization and coins the term “**Terminator**.” Sends analysis and early warning information to farmers’ organizations, civil society and media worldwide.

May 1998 – Following a successful campaign by farmers and indigenous peoples in Bolivia, Colorado State University professors are forced to drop patent on quinoa.

June 1998 – ETC launches postcard campaign targeting the Prince of Liechtenstein who owns RiceTec Inc., the Texas company that holds patent on Basmati rice.

September 1998 – ETC releases major report on systemic biopiracy – 147 dubious plant variety claims on cultivars actually bred by farmers in at least 43 South countries.

October 1998 – CGIAR adopts a “no Terminator” policy in response to international uproar over genetic seed sterilization.

December 1998 – Pat receives Pearson Peace Prize from Canada's Governor-General.

External Review – ETC Group

October 1999 – Monsanto CEO announces that his company will abandon plans to commercialize Terminator.

December 1999 – US government-funded biopiracy project in Chiapas denounced by Mayan Indigenous groups

January 2000 – ETC begins campaign against patent on Enola bean of Mexican origin.

May 2000 – The Coalition Against Biopiracy (including ETC) holds its first Captain Hook Awards ceremony at COP5 in Nairobi.

May 2000 – Biodiversity Convention in Nairobi fails to ban Terminator, but adopts precautionary language and *de facto* moratorium.

September 2000 – A large international conference on Biopiracy and Bioprospecting is organized by ETC and Mexican partners in Mexico City. The conference includes indigenous peoples, farmers organizations, CSOs, academia and government representatives. Opinion makers and politicians debate the issues emerging from the conference for one month in national press.

October 2000 – CGIAR's Center Directors' Committee decides to allow intellectual property protection over materials derived from germplasm accessions held under the FAO-CGIAR Trust Agreement of 1994. ETC challenges the CDC's authority and, at the CGIAR AGM, the CDC acknowledges the authority of FAO and withdraws its decision.

January 2001 – International Center for Tropical Agriculture in Colombia (CIAT), supported by FAO, challenges the Enola bean patent at US Patent & Trademark Office.

January 2001 – Dag Hammarskjöld Foundation publishes *The ETC Century* by Pat Mooney.

March 2001 – Andean groups, with support from ETC, protest nuña bean patent.

June 2001 – Dag Hammarskjöld Foundation hosts international seminar, “What Next? Technological Transformation: Addressing Nano-technology and Other Emerging Technologies in the ETC Century.” ETC follows-up with three regional seminars in Chiang Mai, Thailand (September 2001), Temuco, Chile (December 2001) and Capetown, South Africa (December 2002) – each hosted by civil society partners in the regions.

September 2001 – Extensive GM maize contamination found in farmers' varieties in two Mexican states. Silvia Ribeiro begins working with coalition of Mexican CSOs, indigenous peoples and farmers' organizations to protest GM contamination in centres of genetic diversity and in gene banks.

September/October 2001 – ETC releases *New Genomics Agenda*, critical analysis of drug industry and human genome research.

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November 3, 2001 – International Treaty on Plant Genetic Resources is adopted by FAO.

November 2001 – US government-funded biopiracy project in Mexico (ICBG Maya) is cancelled. The campaign is supported by Silvia's research. The indigenous campaign succeeds in halting all existing bioprospecting projects in Mexico.

December 2001 – ETC releases *New Enclosures: Alternative Mechanisms to Enhance Corporate Monopoly and BioSerfdom in the 21st Century*.

December 2001 – ETC releases *The Law of the Seed*, an analysis of the International Treaty.

May/June 2002 – ETC's first major report on health and safety impacts of nanotech, *No Small Matter!*, draws attention to the potential harmful effects of manufactured nanoparticles in living organisms and the environment and issues first call for global moratorium on new nanomaterials until lab protocols and regulatory regimes are in place.

June 2002 – World Food Summit – *5 Years Later* is held at FAO in Rome. ETC Group is part of the NGO coordination known as the IPC.

July 2002 – Peruvian Farmers/Indigenous Peoples Denounce Maca Patents.

January 2003 – ETC releases *The Big Down – From Genomes to Atoms: Technologies Converging at the Nano-scale*, an 80-page report, the first comprehensive and critical analysis of the implications of nano-scale technologies by civil society.

March/April 2003 – ETC releases report on Little BANG Theory – the strategy for converging technologies (bits, atoms, neurons and genes).

April 2003 – ETC releases major study, *Size Matters*, explaining the case for a global moratorium on nanotech and including a scientific literature review by a leading nano-toxicologist.

May 2003 – After ten-year delay, EPO panel hears ETC's challenge on Monsanto's species-wide patent. The patent is upheld. ETC files appeal in 2004.

September 2003 – ETC identifies first major environmental release of nanotechnology product.

November 2003 – ETC and CSO partners launch international protest on GM contamination of Mexican maize.

November 2003 – ETC releases *Oligopoly, Inc.* – analysis of concentration in corporate power in life sciences and food processing and retail. This year's report includes nanotechnology.

January 2004 – ETC publishes critique of CBD and Access and Benefit Sharing (Bonn Guidelines) to mark 10-year anniversary of CBD.

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February 2004 – The Coalition Against Biopiracy holds its third Captain Hook Award Ceremony in Kuala Lumpur at COP7.

March 2004 – Two ETC staffers are invited to dinner with Prince Charles and members of the Royal Society to offer advice on nanotechnology.

March 2004 – ETC releases first critique of J. Craig Venter’s US-government funded expedition that is collecting microbial diversity worldwide for engineering life.

May 2004 – Canadian Supreme Court (*Monsanto v. Schmeiser*) affirms Monsanto’s right to sue farmers for patent infringement. ETC Group was an official intervener in the case.

July 2004 – Prince Charles publishes article on nanotechnology, highlighting need for wider societal debate and the potential negative impacts for the global South.

November 2004 – ETC releases *Down on the Farm*, the first comprehensive analysis of the impact of nano-scale technologies on food and agriculture.

January 2005 – ETC Group publishes *Communiqué* exposing Syngenta’s “multi-genome” patent applications.

February 2005 – In meeting with head of Syngenta Foundation in Switzerland, ETC learns that Syngenta will allow its offensive multi-genome patent applications to lapse.

February 2005 – ETC exposes Canadian government’s plan to propose field-testing and commercialization of Terminator during meeting of SBSTTA10 in Bangkok. Disaster narrowly averted.

5. Resources – With what personnel/financial resources does ETC work?

5.1 Structure

Although its programme history is traced back to 1977, ETC Group was first incorporated in the Netherlands in 1985 as an international nongovernmental organization with offices in Canada and the United States. Subsequently, ETC Group has also been incorporated in Canada as a not-for-profit nongovernmental organization and Friends of ETC Group has been incorporated in the United States as a non-profit organization devoted to the support of ETC Group. ETC has international nongovernmental organization status with the United Nations Economic and Social Council (ECOSOC), FAO, UNCTAD, and the UN Convention on Biological Diversity.

The Group has eight permanent staff (not all full-time) based in four locations: Ottawa (three staff), North Carolina (two staff), Mexico City (two staff) and Oxford (one). Accountancy services are provided by a specialist consultant. The annual budget is currently around \$CA 700,000, most of which is provided by a small group of donors (see 2004 accounts in Appendix).

The Group is overseen by a Board of Trustees, comprising a President (Chair), a Secretary-Treasurer and at least six other members, of diverse background and expertise. (For details, see Appendix.) It meets physically once each year and a second time by teleconference. The three-member executive committee meets by teleconference approximately every six weeks.

5.2 Staff and facilities

5.2.1 Ottawa:

Offices: The ETC unit here consists of four small offices, for the Executive Director (Pat Mooney), the Office Manager (Charlie Shymko) the Operations Director (Elly Vandenberg) and the Accountant (Maurice St Pierre). It recently moved here from Winnipeg (August 2004). The suite of offices is on the first floor of a central building, downtown, and is shared with South Asia Partnership (another NGO). The offices are effectively but not lavishly fitted out, with modern computer equipment, high-speed Internet access, etc.

Staff:

Executive Director: (Pat Mooney)

Pat is one of the original founders of ETC/RAFI (see above) together with Hope Shand, the current ETC Research Director, and Cary Fowler, now Deputy Director of the Centre for International Environment and Development Studies at the Agricultural University of Norway. Pat's role in ETC is that of 'Plant' in the Belbin team management scheme³. Pat is dynamic, inspiring and convincing. His physical vision is very poor and continues to deteriorate. In consequence of this, he left high school before graduating (no longer able to see the blackboard) and so is largely self-taught. In these circumstances, to be widely recognised as a highly knowledgeable authority

³ See <http://www.belbin.com/belbin-team-roles.htm> Belbin team roles (Henley Management College). The attributes of the 'Plant' role are: "Creative, imaginative, unorthodox. Solves difficult problems."

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in so many diverse areas is truly remarkable. He continues to read widely, using a range of technical aids, such as text-to-speech computer programmes and talking books. He travels widely, to meet colleagues in the South, to attend conferences and international negotiations. He has a particular talent for interesting exposition of ETC's themes, and especially for the invention of catchy names and phrases: two of the most famous are 'Biopiracy' and 'Terminator'.

Office Manager: (Charlie Shymko)

Charlie has been with ETC for about two years: she joined the unit when it was in Winnipeg and has moved with it to Ottawa. Charlie is in charge of administration, primarily in Ottawa, but with responsibilities also throughout the group. She has previous relevant administrative experience (though with rock groups rather than NGOs) and also with websites and HTML. In common with other staff, she is inspired by the objectives of the group.

Director of Operations: (Elly Vandenberg).

Elly started with ETC at the end of October 2004 on a part time basis. As Director of Operations she undertook a needs assessment for the organization.

Accountant: (Maurice St Pierre).

Maurice is an independent accountant, providing services to a number of NGOs, including ETC. He worked with ETC when it previously had an office in Ottawa, but was not able to continue after the transfer to Winnipeg. It was fortunate for ETC that he was able to resume working with them on their return to Ottawa – typically, for one to two days each week. His previous knowledge of ETC, as well as experience of other NGOs, is valuable.

5.2.2 Mexico City

Staff:

ETC has two staff members in Mexico.

Programme Manager: (Silvia Ribeiro)

Silvia has a long history as a researcher on policy issues linked to ecology, biodiversity, biotechnology, local development and community rights. She has a background as a publisher, journalist and environmental campaigner in Uruguay, Brazil, Mexico and Sweden. As part of Friends of the Earth Uruguay, she has also been vice-chair of Friends of the Earth International.

As a civil society representative, Silvia has followed the negotiations of several UN environmental treaties such as the Commission on Sustainable Development, the Convention on Biological Diversity, The Cartagena Protocol on Biosafety, FAO, where she has intervened in the Plenary of the COPs on behalf of NGOs. She was invited as speaker to the first session of the WTO Committee on Trade and Environment.

Silvia has also been an invited speaker at many civil society events around the world speaking on biopiracy, new technologies, corporate concentration, intellectual property, indigenous and farmers' rights. In 2004, she was an invited keynote speaker at the Social Forum of the Americas, the German conference McPlanet, the First Brazilian Festival of Peasant Maize, among several others.

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Silvia has produced a number of articles related to the same issues. Besides contributions in at least a dozen books, her articles have been published in Latin American, European and North American magazines and papers. From 1994-1999, she was the editor of the Latin American magazine “Biodiversidad, sustento y culturas”, published by Friends of the Earth Uruguay in collaboration with GRAIN. She is currently a member of its international advisory editorial committee. Her articles are regularly published in the Mexican newspaper “La Jornada”, the Spanish magazine “Ecología Política” (she is a member of its editorial committee), the Latin American Information Agency, based in Ecuador, and the Brazilian paper “Brasil de Fato”, from where they are also reproduced in a number of websites around the globe.

Silvia is competent in Swedish, French and Portuguese. Her native language is Spanish.

Research/administrative assistant: (Verónica Villa)

Verónica is an anthropologist with particular experience working with the Maya and other indigenous peoples both in Chiapas and elsewhere in Mexico. Aside from general administrative support in Mexico, she also makes speeches and organizes seminars in Mexico and elsewhere in Latin America. Verónica coordinates ETC’s Spanish translations and is responsible for strengthening ETC’s visibility in Spanish on the Internet. Currently, 5 of the 10 countries that most frequently access the ETC website are Spanish language countries.

Offices:

A small office has been set up next to the house of one of the staffers, in a compound shared with two other NGOs. The facilities and the furnishing are very basic: a couple of desks and some bookshelves, two laptops (one of them quite old) and a printer. The office does not include extra space for meetings with visitors, for example. When such visits do occur (very often), the interference with the working routine of the staff member who is not involved can be significant.

Connectivity is, however, well developed. They have a broadband connection, phones and fax. Silvia Ribeiro has a cell-phone and a wireless connection in her laptop, allowing her to keep her research and her connection with other ETC members even when she travels.

Despite these very basic conditions, no staff member has expressed inconvenience. They have managed to keep a very well organized place, and very well organized files and documents. And although the office place is small, the fact that it is next to the home of one staffer provides levels of flexibility, which may be important to allow for coordination through different time zones; it also allows a level of safety that is key in Mexico City. Another advantage of the location of the offices in Mexico City is that ETC’s offices are part of a group of offices on the same grounds, which are used by other NGOs that cooperate closely with ETC, thus facilitating coordination and cooperation links.

However, it would be very helpful if ETC had the resources to upgrade the Mexican office facilities and furnishings. Connecting all their devices as a network is a basic step that should be taken; upgrading their hardware might be very useful. Also, setting up additional space for meetings seems necessary.

5.2.3 Carrboro, North Carolina, USA

Offices: The ETC unit here is sited in a pleasant, small urban district, close to the University of North Carolina. The Carrboro office is also close to Duke University and within easy driving of Research Triangle Park – a nationally-respected public/private research centre for both biotechnology and nanotechnology. ETC comprises two offices in a small first-floor unit, facilities being shared with two other small operations. One office is big enough to double as a room for small meetings. The suite is fully equipped for modern communications (telephone, fax, Internet).

Staff

Research Director: (Hope Shand)

Hope is one of the original three founders of RAFI. She has a master's degree in Regional Planning (population and development) and a B.A. from Duke University in Comparative Area Studies. Her technical writing and research skills are widely recognised as first-class, and are major contributors to ETC's strong reputation in this area. Hope is also competent in Spanish.

Programme Manager: (Kathy Jo Wetter)

Kathy Jo has a Ph.D. in the History of Art. She originally joined the Carrboro office as a part-time administrator about four years ago, but now works full-time and most of her time is spent doing programme work. Kathy Jo is competent in German and is learning Spanish.

5.2.4 Oxford, England

Offices:

The ETC office in Oxford is in a small building on the outskirts of the University town. The facility is shared with other activist CSOs, who benefit from a subsidised rent from the Ethical Property Company. ETC has a single small room, but properly equipped with two desks, bookshelves, computers, etc: this seems adequate for the needs of the occupant, who travels frequently, although – as in the Mexico office – no meeting place is available. This is a good location, convenient to the University, with its academic, media and commercial contacts.

Staff:

Programme Manager (Jim Thomas)

Jim has worked for ETC for about 2 years. Before that he was with Greenpeace UK for six years, working on communication. He has a degree in History and English, and an interest in the history of science. He came to ETC in part because of a strong and growing interest in nanotechnology, which found an echo in ETC's interest in the subject. His day-to-day work includes writing reports and articles, setting up workshops, attending meetings of various kinds (for example, a recent meeting in Brussels concerned with the Materials Transfer Agreement for the International Agreement on PGRFA; a meeting to discuss the Royal Society's report on nanotechnology). Jim is also an avid writer and organizes Oxford's "slam poetry" events.

5.3 Staff policies

It is clear that ETC staff enjoy the work they do and derive considerable satisfaction from it. In such a situation, there must be some temptation for an employer to take advantage of staff goodwill. As far as could be determined, ETC resists this. Staff

questioned on this point felt that they were well treated, and that salaries and conditions were fair and competitive with those offered by other similar organizations. There is a strong 'work ethic', but this is not seen as unreasonable, rather as a strength of the organization.

An intrinsic advantage of a small organization is that communications are usually good, since the chains of communication are short. This applies in ETC. Jim Thomas in Oxford, England, currently the most isolated staff member geographically, saw no problems here: he is in almost daily contact with colleagues by telephone. The only minor problem was the 5-hour time difference with North America.

Good communications avoid most personnel problems. Where communications are good, problems are quickly resolved or avoided altogether. A small organization can be sensitive to all its staff and neither needs nor can afford the bureaucracy of full detailed written policies and procedures.

Some former members of staff gave interviews. Their reasons for leaving were varied, but in no case were they as a result of conflict. Rather these interviewees confirmed the notion of ETC as a good employer. They spoke of how much they had enjoyed working for the organization, and how much they had learnt from it: “*a privilege... a unique opportunity...*” Several former staff members now work with other NGOs.

5.4 Board of Trustees

The Board of Trustees has legal authority over all aspects of the programme, management and financial arrangements of the Group. In practice, the Board of Trustees provides reflection and oversight of the programme and, in particular, assures the quality and effectiveness of the programme, but does not develop or direct the programme. However, the Board of Trustees, through its annual meeting and through its Executive Committee, does direct and approve the management and financial arrangements of the organization on a continuous basis.

ETC's Board gathers eight experienced persons from around the world, with an unusually rich blend of backgrounds and perspectives. They meet in person once a year, and hold telephone conferences on at least one other occasion each year. Additionally, an Executive Committee formed by the Board President, the Secretary-Treasurer, and a third Board member meets by teleconference call on average every six weeks. The Executive Committee is supported on its conference calls by the Executive Director and the Director of Research. In their annual meeting, the Board discusses the organization's programme of work and provides an overview perspective and general guidance for the work. The Board also studies and determines the budget and management of the Group. At each annual meeting members of other CSOs are customarily invited to participate in a one-day ETC Seminar intended to highlight and debate either an aspect of work or a specific issue of concern for ETC Group. In this way, ETC's civil society partners also have an opportunity to provide a direct input to the Board and staff on their views of ETC to work.

The Executive Committee deals with matters of administration, as well as programme content in between Board meetings. It is their role to ensure that administrative and financial procedures are in place, that finances are healthy, and working conditions adequate. ETC has thus in place all the necessary mechanisms to ensure compliance

with sound administrative standards, as well as with accounting and legal requirements. It has also created working conditions that are unanimously ranked as very good by staff members.

When dealing with programme content, the Executive Committee discusses specific emerging issues and events, and the Board members provide general directions, but the specific decisions to be made on programme activities and the work and negotiations arising are left to the discretion of the staff.

Nominations for ETC Group board members are proposed by members of the board, staff and partners to a nominating committee of the Board. The nominating committee then makes recommendations to the annual meeting of the Board, which elects new members. Board members have three-year renewable terms on a standard basis to ensure continuity. In making recommendations to the Board, the nomination committee takes geography, gender and background into consideration. All board members have demonstrated knowledge and interest in at least one aspect of ETC's work. Customarily, a majority of Board members are from the South.

5.5 Finance

5.5.1 Financial Procedures

The reviewers are not financial experts or auditors, but some investigation of the financial procedures and controls was made. These appear to be appropriate. All payments are authorised by two staff signatures before processing. The financial year runs from September 1 to August 3: a budget is drawn up, and monitored against expenditure. Expenditure is assigned over projects, so that donors supporting specific projects can see that the funds they provide have been spent on the projects they have supported. Each year is different: in most years however there is a small balance of income over expenditure. Two reserves are being built up: one to provide for an orderly dissolution of the organization and the staff if this becomes necessary and a second to enable the group to address any major crisis that might require sudden expenditures (legal fees, for example). A difficulty is that these reserves are in US dollars, recently producing (on paper at least) significant exchange losses.

5.5.2 Financial Support

The organization currently runs almost entirely on grant income. Current accounts for the last two years are shown in the Appendix. Turnover last year was \$CA 660,000, as compared with \$CA 1,000,000 in 2003 – down 34%. The major item of expenditure is staff salaries (63% in 2004, up from 45% in 2003⁴). Next are travel (8.6% vs. 4.9% in 2003), meetings (6.5% vs. 20.3%) and office rent (4.7% vs. 3.5%). Phone expenses are not insignificant (4% vs. 4.2%): but this indicates (we think) the importance attached to the four offices keeping in touch, and possibly also a willingness to substitute, in appropriate cases, phone conferencing for travel (saving money, time and effort).

The organization operates with the customary unpredictability of a grant-seeking international advocacy CSO. Grants typically cover one or two years, and often are assigned to specific projects. It is impressive that the substantial reduction in income in 2004 led only to a very small deficit (and that only after taking into account the non-recurring expenses of the move from Winnipeg to Ottawa). Presumably some of

⁴ Due to reduction in turnover – only marginally up in absolute terms.

the 2003 expenses were covered by specific grants for projects terminating in that year. However, the organization has a very limited donor base. In 2003 the three biggest donors provided 76% of the grant support: in 2004 this figure increased to 94%.

6. Peer assessment – What do others think of ETC?

The reviewers sought opinions from as wide a range of interests as possible, generally by telephone. Interviewees included 29 academics/researchers, over 20 industry representatives, over 15 persons who work in or participate as governmental representatives in international bodies, and 53 members of CSOs from Africa, Asia, the Americas and Europe. Some of the interviewees requested confidentiality before accepting to answer any questions. The reviewers therefore have not considered it appropriate to provide a list of interviewees. By way of example, two records of specific interviews are given in the Appendix. What follows is a summary of views, with emphasis on particular topics.

6.1 General views.

Regardless of the specific area of work, a vast majority of the interviewees – and especially those from CSOs in the South- believed that ETC's work is fundamental, and unique. ETC provides information and analysis that no other organization is providing regarding genomics and nanotech. In the area of genetic resources and biotechnology, there are now numerous other organizations that provide analysis and information, but ETC's work is still regarded as some of the best and most reliable. When asked whether ETC was duplicating work that could be done by others, most respondents indicated they did not believe so, although a better coordination with some other CSOs working on the same issues (especially PGR and biotechnology) would be very productive.

6.1 Plant Genetic Resources

ETC established its reputation with its campaign to raise awareness of the importance of PGR. Central to this campaign was (i) to get recognition of the fact that for most crops the original centres of diversity are located in the tropics and the sub-tropics, (ii) Recognition that small farmers have played and still play an important role in managing and conserving such PGR and (iii) that such farmers require rights to protect them from appropriation of PGR by Western industrial interests.

Opinions about ETC varied, naturally, somewhat according to the respective affiliation of respondents.

FAO has been centre-stage among ETC's activities from the 1980s.

It was generally agreed that (RAFI) ETC has played a major role in all international developments in plant genetic resources concerned with ownership, access and conservation of genetic resources. Some stated that, without ETC, it is doubtful that there would have been an FAO Commission and Treaty on PGRFA.

Considering its small size, its impact has been impressive. It is fair to say that without ETC the international landscape of PGR would probably look different from what it does now. The main reasons for this success are, in the words of various respondents interviewed, its effective networking, its early identification of what are major issues,

the quality of the published documentation covering and highlighting such issues and finally its efficient use of communication, access to media and smart lobbying.

At the FAO Commission on PGRFA meeting (Nov 8-12, 2004), the FAO secretariat and the chair stated that ETC was still needed as a critical voice, suggesting ways to move forward. Developing country representatives were generally equally positive about ETC.

Many developed country representatives, while stating (politically correctly) that CSOs like ETC have a role to play, felt that ETC's actions have contributed to complicating access to PGR: which is not always to the advantage of agriculture and small farmers.

Members of NGOs – especially those working with small farmers in non-industrialized countries – believed that ETC's role in the field of genetic resources had worldwide impact. Several interviewees indicated they had become aware of the issues because of ETC's work; others believed that ETC's work had added a key political and economic context to the PGR conservation work they were already doing. It was unanimous that ETC had provided information that helped them continue working in participatory PGR conservation and do policy work on related issues. Another appreciated aspect was how ETC had supported or helped the building of different cooperative networks, regionally and globally.

Although ETC is seen mainly as a source of analysis and information, in Mexico it is especially valued by civil society because of its support of actions taken by farmers and indigenous peoples' organizations. (The support provided to indigenous people's organizations to stop bioprospecting activities is mentioned later in this report.) The support provided by ETC to a long-term initiative by different social organizations to detect, prevent and revert the genetic contamination of native corn is also highly appreciated, even beyond the Mexican borders. For many Mexican and Latin American interviewees, these examples show that ETC is willing to provide information and expertise according to needs felt or identified by social organizations, and not just according to an agenda unilaterally determined.

Representatives of the private seed industry were generally critical. It was felt that ETC was extremely political and harboured views that, on occasion, were poorly supported by science. ETC, in their view, was not very open to criticism and diverging views. It was appreciated that to raise public interest and debate, issues have to be simplified. However, in their view, ETC often oversteps the line between raising issues and taking a biased and challenging position, thereby losing credibility.

6.2 Biotechnology

As with genetic resources, ETC was one of the first groups to call attention to the possible impact of biotechnology. It is generally agreed that they had again a significant impact on the way certain aspects of biotech and the different debates around it developed. There is general agreement among respondents that raising issues, and the way ETC does this, is important. Their action against the aptly termed "Terminator Technology" (GURT), almost single-handedly creating world-wide protest, has been one of their most focussed and effective campaigns. Also their stimulating role in the CRUCIBLE I and II project is judged generally as positive and balanced.

Views on ETC's position in the debate were, again, often linked to the background of the interviewee.

Some interviewees linked to industry and research stated that there is a thin line between being critical of new technologies and appearing to be anti-technology. It is not always clear whether ETC is concerned about the technology as such, or about the corporate control and the directions in development of such technology. The same danger lurks around their present starting involvement in nanotechnology. At least for some NGO respondents, a possible opposition to the technology per se was not considered a problem; they felt that a strong debate on the technology itself was necessary. Some indicated that ETC should promote that debate more actively

From the point of view of interviewed researchers, the relationship between ETC and this technology sector is something that should be improved. For example, it was stated by a respondent from research that both biotechnology and nanotechnology are technologies with potential far-reaching effects on food, the environment and the economic landscape, creating whole new industries. They deal with emotive issues with enormous scope for misunderstanding and potential damage. Scientists are generally poor communicators. CSOs are needed to inform and initiate public debate, also in the interest of science. Some PGR scientists feel that ETC has tended to treat many of them unfairly, as part of the enemy that seeks to appropriate genetic resources and exploit small farmers. Many plant breeders see themselves as motivated primarily by an interest in using genetic diversity and producing planting materials that are beneficial to farmers. By alienating them, an important potential source of support may have been lost, leading to some errors in judgement. It was suggested that in involvement with biotechnology and nanotechnology this "mistake" should be avoided. Many scientists in this field share concerns about developments in this field with ETC. It was argued that for ETC to play a constructive role, it needs credibility in and co-operation with the scientific community. This raises an important issue.

In the fight for funds from public and private sources and attention of the media, potential benefits of both biotechnology and nanotechnology are often grossly overstated. Privatisation of research, even at universities, has eroded its independent and critical role. Scientists that criticise developments in their own fields of research may seriously harm their future prospects for financial support. Research results, even if financed from public sources, are often submitted for Intellectual Property Protection and subsequently licensed on restrictive terms to industry. This reduces transparency and access to research and information. As a result, the research community is no longer trusted by society for critical analysis and responsible management and use of developments in research.

It is for this reason that many respondents, including concerned scientists, stated that organizations like ETC are becoming increasingly important in a watchdog function and as a source of public information and critical analysis.

6.3 Genomics

In 1993, ETC Group uncovered the first human cell line patents involving indigenous peoples, and started the first monitoring work of the Human Genome Diversity Project in collecting human genetic variation around the globe. The interest provoked around the world was very high, especially among organizations of indigenous

peoples. By 1995, ETC had succeeded in forcing the U.S. government to abandon its policy of patenting human cell lines and to abandon three patent claims. By 1999, ETC successfully ended US National Science Foundation funding for the Human Genome Diversity Project. ETC is currently organizing global strategies to address the much larger sequel strategy being developed by the pharmaceutical industry together with some governments known as the HapMap Project.

The impact of this work has been significant, and those interviewees who made comments on it unanimously indicated it was a work of extreme importance as ETC has significantly contributed to the understanding of the dangers behind genomics (including biowarfare and biopiracy). The information provided by ETC was used by a wide range of indigenous peoples' organizations to mobilise their members – as well as to gain support from other sectors of society – against cell collections among indigenous populations; in some cases, sampling was halted altogether. However, some of those same interviewees indicated that they felt that this information was generally underutilized by social and civil society organizations.

6.4 Nanotechnology

In 2000, ETC widened its agenda to include nanotechnology as one of its major areas of research. During 2001, ETC released its first reports on nanotech and launched a series of meetings with CSOs at the regional level to discuss nanotech's potential impact on society. Since then ETC has been regularly reporting on new nanotech developments, the corporate and governmental structure that supports them, as well as on their potential impact on health, the environment and society at large. Nanotechnology promises to introduce totally new production processes and products that may have enormous impacts on the economy and society. Although the industry and researchers claim to have learnt from mistakes in the introduction of biotechnology, close scrutiny of the consequences of nanotechnology is of paramount importance.

ETC has successfully entered the debate on the consequences of nanotechnology in its publications, *The Big Down: Atomtech - Technologies Converging at the Nano-scale* and *Down on the Farm: The Impact of Nano-scale Technologies on Food and Agriculture*. It has done so at a time when the public knows little about nanotechnology and what is happening in research institutes around the globe. It has immediately attracted international attention. As an example, ETC has been specifically acknowledged by the UK government for having convinced Prince Charles to take up this issue which in turn led to Prime Minister Blair asking the Royal Society to undertake a study, which led to specific recommendations for regulation for products containing nano particles. At the first meeting of the International Council on Nanotechnology (ICON) in Houston, Texas in October 2004, it was publicly acknowledged that ICON was formed, in part, due to ETC Group's research and advocacy work. ETC Group also consulted closely with the Rockefeller Foundation and IDRC in proposals for a multi-stakeholder dialogue entitled "Nanotechnology and the Poor." For government, industry and scientists involved, ETC seems to be an actor that deserves attention. This became evident at a symposium on "Nanofood" organised by the Royal Society of Agriculture in the Netherlands (Wageningen, October 2004) where ETC was quoted favorably by an industry representative, even before its *Down on the Farm* report was formally published. A major reason may be that the same industries are involved that spearheaded biotechnology. These industries have seemingly learnt from their

disastrous attempt to push biotechnology and have become extremely sensitive to public criticism.

The value and effect of ETC's intervention on nanotech is shown by industry reaction. No less than three proposals have been put forward for a dialogue on the direction that nanotech research should take, and industry are preparing to put very significant resources into the project.

6.5 Global vs. regional or local work

One of the specific questions included in the TOR of this review was about the balance between global and regional/local work. The question was asked to members of NGOs and CSOs, and the response obtained was basically "no response". Views on the value of the work done by ETC in international fora, the UN system or initiatives such as multi-stakeholder dialogs, were very diverse. Some thought these efforts were useful and effective, while others saw them as quite ineffective and distracting. (These attitudes related to global work in general, not specifically to that of ETC.) However, when asked whether ETC should stop the global work, no one said yes. Those who questioned the usefulness of the global work said that it did not matter if ETC did it because their information and analytical work was still good enough to make them important allies with critical contributions. One interviewee who was generally very critical of the global work, said that maybe the global work done by ETC would have little direct impact, but if ETC could obtain through it good information not available otherwise, then the effort would be worth it.

Because of these reactions, no specific recommendation will be included on the balance of global vs. regional or local work. But these comments should highlight the fact that information and analysis seem to be unanimously regarded as the most fundamental contributions by the ETC Group.

7. Assessment - What is the value of ETC's work?

The consensus of the reviewers, and of sympathetic observers to whom they have spoken, is that the value of ETC is four-fold.

First, it is a **source of information** – on new technology, on corporate concentration and on possible effects on the developing world – which is new, **accessible, timely and reliable**.

Secondly, it has particular skills in highlighting and focussing public attention on specific issues: in **stirring up controversy** as a means of bringing political pressure to bear.

Thirdly, it usefully **engages with existing structures** (international organizations, courts, etc) to **change outcomes**.

Fourthly, it supports local work and networking, thus widening the involvement of civil society both in policy work and mobilization for change.

7.1 Source of information

The Group writes research briefs in its areas of interest. These are published at frequent intervals, and are characterised by:

- Relevance, promptness and topicality, with amazing efficiency in identifying and circulating the latest relevant information, however inaccessible.
- High quality analysis (broad, deep and accurate)
- Punchy and readable language.

Repeatedly, interviewees praised the papers and briefs produced by ETC. *“Their papers are professional and useful to other groups (NGOs, etc.). They’ve done some excellent papers, e.g., by Hope Shand.”* (Northern writer on development). *“Their work has a huge amount of respect in the South - though it’s not received uncritically.”* (Northern donor). *“Their work is rigorous, and unconstrained by academic requirements - they’re free to follow their noses”.* (Northern NGO). *“I find their work invaluable, though I don’t always agree with them in every detail”* (Southern NGO).

The information they produce is respected by South partners. This was fully confirmed by the interviews (almost every interviewee in Latin America belonged to an NGO or CSO. There were only two persons coming from scientist/university background). ETC was unanimously regarded as a serious organization, whose main characteristic is to provide high quality data and most often very sharp prospective analysis. Many of the interviewees said that ETC’s website was one of the first sources they consulted when they required new and detailed data, or when they wanted to know what was emerging. This view was expressed even by some interviewees that expressed differences with ETC regarding what to do about emerging issues. When specifically asked, NGO and CSO members indicated that even when those differences existed, they still valued highly the work of ETC and regarded ETC as an important ally, because the information they provided was a key support to their own activities.

Scientists and academics expressed equally positive views regarding the data ETC provides, and even expressed admiration for their capacity to do research. However some felt ETC’s analysis was most often but not always accurate; they felt ETC tended to be too negative regarding some biotech tools (for example, probes or some medicines) that had a positive potential if they were well-used. One interviewee indicated that ETC should more clearly distinguish between the potential impact of some technologies *per se* (like the ones mentioned) and the way they are being used because of the social and political environment (specially IPR and corporate concentration).

Academics from the Social Sciences, on the other hand, believed that the information provided by ETC is highly useful, as it is permanently updated, agile, and incorporates contextual issues that very few documents discuss. Their documents are often used as reading materials in their classes.

Reports read some time after the event in a number of cases confirm ETC's judgements on difficult issues. For example, a report in 1987 on patenting plants in the USA explains that this may prevent farmers replanting or exchanging patented seed, or competitors improving such seed by further breeding. This is well understood today, but – at the time – few realised that such consequences might follow.

7.2 Stirring up controversy

Again, respondents were agreed that this was one of ETC's outstanding skills. Not everyone approved of it (see below), but no-one questioned that it was so. Without exception, NGOs regarded it as a necessary part of making a case for change. This was supported by others, e.g.: "*Politicians aren't much influenced by argument. You have to hold their feet to the fire!*" (Donor). ETC has a long track record of generating controversy over a range of topics, for example 'Biopiracy' (including the patent on a form of Basmati rice, the yellow bean patent, and attempts to obtain plant variety rights for materials from CGIAR seed banks) and more recently nanotechnology. It is remarkable that this has been done so successfully and consistently by such a small organization. All their campaigns have been within the law: none has resorted to illegal or dangerous stunts.

One talent that has helped them to do this is a fertile facility with words: the invention of names or concepts. It is difficult to overestimate the effect that this can have. One example is "Biopiracy"⁵, a word that was coined by RAFI in 1993, in response to Western government complaints about 'piracy' of copyright music and software. The name crystallised a concept which has had a powerful influence on international developments. Governments meeting in Geneva over the last three years have been discussing the protection of traditional knowledge with the object of preventing 'biopiracy', and the idea forms part of the motivation for developments in the Convention on Biological Diversity, leading to current proposals to require patent applicants to disclose the origin of genetic resources.

A similar invention was "Farmers' Rights". This name (perhaps also the concept) was invented by RAFI in 1985, during the first meeting of the FAO Commission on Plant Genetic Resources in Rome. It was proposed to declare genetic resources 'the universal heritage of mankind'. To this commercial interests objected, saying that the declaration must not apply to varieties specially bred and sold as part of a commercial enterprise: these were properly the subject of "breeders' rights". In response, RAFI espoused the cause of "Farmers' Rights", the right of farmers, exercised for thousands of years, to save, select, improve and share seed. The eventual result was a formal resolution defining "Farmers' Rights" as '*arising from the past, present and future contributions of farmers in conserving, improving, and making available plant genetic resources, particularly those in the centres of origin/diversity*' (FAO, Resolution 5/89). Today no discussion of intellectual property legislation on plants, in countries of the South or in international fora, can be complete without consideration of "Farmers' Rights".

A third name which has had wide currency, and wide influence on debates, is 'Terminator'. This is the name given by ETC to the technology which produces sterile seed – genetically modified to grow into plants from which seed may be harvested, designed to be normal in every way except in their ability to grow when planted. From the viewpoint of seed technologists, this is an advantage because it allows them to invest in producing seed carrying expensive and valuable traits, which only they can reproduce: the farmer using genetically modified sterile seeds cannot save seed, but will buy anew every season – provided the trait is worth more than the price differential over fertile seed that lacks it. A case may be made both for and against

⁵ Some (particularly those criticised for it) complain that this term is rather unclear: but its elasticity is part of its power. It clearly connotes a serious wrong.

this technology⁶: but the name Terminator has been a powerful weapon in the controversy. The alternative term 'GURT' – the acronym for Genetic Use Restriction Technology' – has had almost no success in replacing it, other than in a few official documents. The name 'Terminator' prejudices the issue. This greatly aids the battle for hearts and minds.

This facility with words is not only useful in debates, preparing the ground over which controversies are disputed (as in the above three examples) but in making their briefs comprehensible and readable for those unfamiliar with the issues.

This skill in deploying controversy clearly influences policy. It is rarely possible, in political history, to assign the causes of events clearly and unambiguously. Nevertheless it seems totally plausible, in the case of the instances listed above (as well as in other similar cases) that ETC's interventions have had a powerful and even determining influence on the course of events. They have been remarkably effective.

7.3 Engaging with existing structures - promoting change

We have in mind, under this heading, the work that ETC has done in a number of international organizations, including the FAO and CGIAR, as well as their battles with intellectual property offices. Several specific examples are considered below.

7.3.1 PGR

In plant genetic resources ETC (in its former incarnation as RAFI) has played a major role in getting international recognition through the FAO for:

- The importance of genetic resources for future food and agriculture.
- The need for international co-operation in conservation.
- The role of developing countries representing most major centres of genetic diversity of crop species.
- The role of farmers in harnessing and conserving genetic resources.
- The need to balance/counter industrial ownership rights by the concept of Farmers' Rights

This comprehensive set of objectives was worked out in various publications (including *Seeds of the Earth*, 1979; *Law of the Seed*, 1983) and promoted through the FAO Commission on PGRFA, through the Keystone International Dialogue Series (1988-1991) and others. It is no mean achievement that all these objectives have been realised in one way or another. It has been suggested that without ETC (RAFI) there might not have been an FAO International Commission on PGRFA nor an International Treaty on PGRFA. Hence ETC has been extremely important if not instrumental in changing the overall PGR landscape since the nineteen eighties.

7.3.2 Farmers' Rights

Also on particular issues, ETC has had an important influence. One example is provided by the concept of Farmers' Rights. This concept was almost haphazardly formulated in a debate in the FAO Commission. It was meant to express the need to provide farmers with rights to balance against legal ownership rights provided for commercially bred varieties (Plant Breeders' Rights [PBR]). The apparent fairness to express the important role farmers have played and are playing in harnessing and

⁶ Thus, obviously it could be disastrous if it led to fertile seed being no longer widely available in developing countries: but was this ever at all likely to happen? For a different assessment of Terminator technology, see http://www.worldseed.org/Position_papers/Pos_GURTs.htm

conserving genetic resources led to widespread adoption of the Farmers' Rights concept, amongst others in the Treaty on PGRFA. It has enormous appeal to policy makers as well as the NGO community.

7.3.3 Terminator technology

Genetic Use Restriction Technology (GURT) was developed to render sterile the seeds of biotechnological developed varieties grown for harvested product. The advantage to the seed industry is obvious: it prevents farmers from multiplying their own seeds. ETC found out about this development and immediately took action. Key to its success was coining the name of “Terminator technology” and the broad access of ETC to the media. In the Terminator issue the whole public unease about biotechnology, moving across natural borders with benefits mainly for corporate interests, seemed to come together. The industry quickly realised that they had overplayed their hand and several firms publicly announced that no use would be made of this technology. However the damage was done and represents one of a series of blunders made in the introduction of biotechnology. ETC's action has provided an important reminder to research and industry, that the introduction of new technologies, certainly where they affect food and the environment, requires independent risk assessment, public debate and transparency in what the technology entails, who controls it, and how the public interest is safeguarded. ETC with other NGO's are of vital importance as they raise valid points, represent interests of (at least sections of) society, identify and highlight issues for public debate. This is especially important as dependency of universities and public research on supplemental funding from private industry reduces their role in critical analysis of – and public information on – new developments.

7.3.4 Bioprospecting

ETC set up an office in Mexico in 1999. Silvia Ribeiro spent a significant amount of work connecting to a number of local organizations (NGOs, Indigenous Peoples' organizations and Farmers' organizations) and provided information. ETC Group was approached by some local groups requesting help to deal with bioprospecting projects and proposals in Mexico, which at the time, were moving forward quickly and in significant numbers. ETC helped to organize and implement a very wide information process among NGOs, social organizations and local communities. Organizations and local groups described what was taking place in the field and ETC Group and other NGOs provided more general information and analysis. The reaction from the social organizations was quite strong; they decided that no bioprospecting was to be allowed in their land and territories. Because of this, important projects, such as ICBG-Maya and UNAM-Diversa were halted; ICBG-Arid Zones and UZACHI-Novartis were not continued. The impact was so strong that a programme officer from a major donor indicated that their policy of support to biosprospecting in the region had to be modified; the Mexican government – at that time as active in promoting bioprospecting as the government of Costa Rica – moved toward a much more cautious policy. Although bioprospecting has not ended in Mexico, it can be said that it has moved at a much slower pace than before ETC connected with the Mexican organizations.

7.3.5 Nanotechnology

See discussion under 'Views of others'. ETC initiated and leads the criticism of this powerful technology, and has been primarily responsible for governments and industry taking a more cautious view of it. This is widely recognised: see for example *The Economist*, 29 December 2004, quoting ETC staff. ETC's papers on the subject

came to the attention of Prince Charles, who took up the issue: and put pressure on the Prime Minister to have the Royal Society conduct an investigation and issue a report. Several important voices in industry now recognise the need to convince the public of the safety of the technology and are taking steps with this aim.

Nanotechnology provides the ideal example of ETC's skill in the early recognition of issues in technology that are likely to become important, and in bringing such issues before the public eye.

8. Assessment – What are the criticisms?

8.1 The difficulties in addressing complex issues.

ETC certainly deals with complex issues, and hence the impact they may have had has complex implications. Perhaps Farmers' Rights is a good example of this. We have already mentioned the importance of the concept. However, it has also been criticised for a number of reasons. It was claimed by some researchers interviewed that it provided an example where ETC favoured political positions and ignored the views of the scientific-technical community.

The criticism included:

- Ownership of genetic materials is foreign to farmer seed systems and free exchange is basic to the functioning of such systems. Farmers' Rights proved to be very difficult to explain to farmers.
- Original farmers or even communities responsible for the breeding of farmer varieties can almost never be identified.
- PGR is operating in a market with many suppliers and few buyers, hence the potential financial benefits are probably small compared with the cost of administration.
- Unlike PBR, Farmers' Rights and, more so the Convention on Biological Diversity's (CBD) concept of National ownership of PGR is complicating (international) access to and use of genetic diversity in plant breeding and this is ultimately harmful to agriculture and farmers.
- Ownership, both by farmers and by nation-states complicates international co-operation in collection and conservation for the general good.

For some NGO members, several of the criticisms can be shared, but their assessment is different. They see these problems arising from the social and political **context** – which favours private property over any other concept – not for lack of understanding of technical aspects. The ambiguity here is, that as a "political" concept, few argue the relevance of Farmers' Rights, but a problem arises when this concept is interpreted in technical and operational terms.

The different reviewers reached different conclusions on this point. For one of the reviewers, ETC's position on Farmers' Rights illustrates to some the danger of highly effective political campaigning combined with insufficient consideration of its technical and operational consequences. His conclusion is that when dealing with complex technical issues a small organization like ETC must identify and assure itself of technical support of critical experts and must be willing to listen. An attitude of "Once the rockets are up, who cares where they come down? That's not my department" says Wernher von Braun" (Tom Lehrer) needs to be avoided. For another of the reviewers, this case shows how complex issues can evolve in totally unintended

ways. Her recommendation is that in cases like this, ETC should reinforce its existing capacity to consult and strategize with others in order to improve chances – as guarantees are impossible – of getting the desired results. For the third reviewer, the complexity of the issues emphasises the extreme difficulty of forecasting how technology will affect society. He sees technological advance as overwhelmingly beneficial – overall. But each advance is different; some changes are for the worse; there are always problems and there are losers as well as winners. Intelligent disinterested criticism is vital. But critics have obligations which mirror those of innovators: to make sure, as best they can, that their criticisms are soundly based, and do not slow progress unjustifiably.

8.2 The challenges inherent in advocacy/controversy.

Not all those interviewed admired ETC's skills related to controversy. As might be expected, these were rarely praised by industry (though few from industry responded to requests to give their views). Sometimes they are seen as overstating, exaggerating, personalising arguments unnecessarily, taking unfair or dubious points. One comment was: *"We've had some very sensible and constructive comments from them in private, when discussing plant genetic resources: but their public statements can be outrageous!"* (Seed industry executive). Some in industry feel that willingness to hold exploratory discussions in private combined with an uncompromising public stance is unfair and difficult to accept. Supporters, though, tend to see it as a strength. One consultant had found ETC input in private discussions extremely productive in persuading a seed company to adopt a particular policy line. But too much flexibility in public could confuse supporters, and undermine trust.

Two more specific complaints, from a seed industry source: firstly, that in controversy ETC tend to elide many different problems, which makes rational debate difficult: secondly, that their stance on the Green Revolution is unfair and dangerous⁷.

Criticisms are not limited to industry, however. Some academic sources repeat them, if with less emphasis, judging that some of the rhetoric is overdone and sometimes counter-productive. One commentator from an international organization had lost sympathy for ETC on observing what was felt to be unreasonable obstruction in an international meeting. One European academic felt that ETC had made errors of judgement: instancing the criticism of the University of Georgia's programme of research in Chiapas, Mexico as 'biopiracy'. This was claimed to be unfair, and to have lost ETC respect and support among ethnologists⁸. However, another academic indicated that the respect within that sector for the work of ETC remains high; he believed that the situation in Chiapas just showed that some researchers still do not understand that researchers need to consult the communities affected by their research, and that ETC had just provided information to local communities that had the right to be informed.

Without attempting to resolve the criticisms (which would be beyond the scope of the review), it must be clear that occasional misjudgements are almost inevitable. A

⁷ Quoting specifically from "Nanotech Un-good!" (ETC Bulletin No 80, July /August 2003) *"To increase yields during the Green Revolution, Northern scientists bred semi-dwarf plants that were better able to absorb synthetic fertilizers and, in the process, increased the plants' need for pesticides. To further the dependency, the agricultural biotechnology industry designed plants that could tolerate toxic chemicals. Agbiotech companies had a choice: they could have structured new chemicals to meet the needs of the plants or they could have manipulated plants to meet the needs of company herbicides. They opted for the sanctity of their herbicides."*

⁸ For a contrary view, see the paragraph headed 'Bioprospecting' above.

talent for controversy is a powerful weapon, and like all such, will not be appraised the same way by different sectors. In order to avoid misuse, it is critical that ETC keeps its high research standards.

8.3 The task of demonstrating policy relevance to donors.

Although some of ETC's financial supporters have been consistent and loyal for one or even two decades, one donor expressed a strong criticism that ETC does not always adequately describe or explain the products resulting from its programme activities. Donors are financially responsible, whether as foundations or governments, to answer for the effectiveness of grants. Clear evidence is needed. Mission statements should lead directly to programmes with specific activities and outcomes that can be monitored and measured. This gives the donor confidence that its investment is being properly used and protects it against public criticism. ETC's 'Impact Statement' (see Appendix) was criticised by one donor because – although it showed recognition by an exceptional range of heavyweight media sources – it did not show how the citations promoted ETC's objectives.

The reviewers have mixed feelings about this criticism (which, as noted, comes from a single source and is not necessarily widely shared). Much of ETC's work involves policy formulation for new technologies. It is always difficult to determine precise outcomes in policy areas except over a period of several years. This difficulty is compounded when ETC works with new technologies, which may be poorly understood by policymakers. It is surely more important to do something useful than to be seen to be doing it. The modern world's passion for targets and measurements is in many cases counter-productive, and breeds cynicism⁹. Targets are supposed to be specific, relevant and measurable. Mostly, however, relevant targets are difficult to measure, and measurable targets aren't relevant. Nor do you fatten a hog by weighing it.

Nevertheless, a Civil Society Organization that requires funding, and from diverse sources, must have in view the reasonable requirements of funders. More thought should be given on ways to demonstrate the value of ETC to potential donors so that ETC's work can continue.

8.4 The difficulty of prioritizing partners and audiences.

Although, as said, the respect for the quality of the data and analysis provided by ETC is widespread, some interviewees mentioned that some of their actions or action proposals created some confusion regarding who their main counterparts/allies/public are. ETC is seen as often addressing government and UN officials; historically, their link with the CGIAR – although always critical – was also seen as strong, even though it seems much weaker now. The same interviewees expressed the view that ETC was often too optimistic – and sometimes contradictory – regarding the willingness or interests of governments and UN bodies (specially from the South) to act in order to address the criticisms expressed or the dangers identified by ETC, and hence their strong emphasis on possible policies or initiatives by those bodies. Simultaneously, they believed that the analysis provided by ETC was very helpful to strengthen other strategies, more linked to bottom-up resistance to certain developments. Another set of interviewees, more linked to science, universities and legal work – but also some linked to NGOs and social organizations – believed that ETC was in fact trying to address a wide range of audiences, and that many policies

⁹ As in the Dilbert cartoon, where the Idiot Boss says "Show me the metric that I can't beat!" (see <http://www.unitedmedia.com/comics/dilbert/>). The criteria are rarely credible to third parties.

could have turned out much more negative towards small farmers, indigenous peoples, biodiversity, etc., if ETC and other groups had not been active at government and international fora. One person believed that ETC's work at those fora was "far more serious" than the work specifically addressed to NGOs (like Captain Hook Awards)¹⁰.

In general, the Reviewers feel that ETC is right to put communication with NGOs as its first priority, but that there is considerable value in engaging with other constituencies, including international fora and law courts.

8.5 The need to demonstrate the relevance of new programme priorities.

As explained in section 6, the perception that ETC's work is fundamental has not been changed by their new programme priorities. The work of ETC in PGR is not only widely known but also still widely used. NGOs, social organizations and academics said that the materials of ETC were a permanent source of support in their activities. Interviewed academics said they also use the materials on genomics and nanotech. For NGOs and social organization, the picture is somehow different. Regarding genomics, ETC's materials were widely used to react against – and in some places stop – collecting expeditions of human samples. However, some of those same organizations felt they had no clear strategy for continuing their work on genomics, and hence could not indicate clearly how they could use the information provided by ETC. Regarding nanotech, some interviewees (mostly from NGOs in Latin America) indicated that ETC's analysis on nanotech seems very solid and highly convincing, and therefore raises some deep worries and fears on its potential impacts. However they did not know how to make those potential impacts really "visible" to their own constituencies. They felt this was important, because if impacts are not visible then people will not react to or act on them. They also felt that the examples and cases presented by ETC did not help enough in this sense, and indicated that they would like ETC to make an effort in presenting cases closer to people's daily experience in the non-industrialized countries. They said that the lack of such examples could even be a factor for themselves not being as active as necessary around nanotech issues, as a source of urgency was somehow lacking.

The different levels of use given to different materials provided by ETC somehow indicate that good information is not always enough. There must be actors capable of using it actively. ETC cannot be burdened with the responsibility of turning information into action, but it can significantly contribute to effective action by different sectors. This is a matter taken again in the recommendations.

8.6 Other minor or miscellaneous issues.

- Several interviewees criticised the website. It has a great volume of useful material but it is badly organised – mainly by date, rather than subject. It could be made much more user-friendly. A good website is vital to those wanting to get a message across.
- Some criticised the name ETC as awkward, and not distinctive (it produces many false hits in Internet searches). Many still refer to the organization as 'RAFI'.

¹⁰ Awards made by ETC at irregular intervals for egregious offences of 'biopiracy' (see ETC website)

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- Some criticised the language of ETC bulletins. The engaging colloquial style generally makes them attractive and easy to read for native English speakers, but can cause difficulties for others. They can be difficult to translate into other languages, e.g., Spanish, and occasionally statements may be misunderstood.
- The cartoons that accompany some of ETC's papers are of variable quality. Some are brilliant, but others are a little weak. One interviewee felt that they should be edited more robustly.

9. Conclusions and recommendations

9.1 The Group must continue.

While differing in their views of particular campaigns, the reviewers are unanimous that the Group has done and can continue to do extremely valuable and important work. It has a unique profile, in the quality of its research and its capacity for selecting and highlighting vital new issues. As the organization is both small and effective, it offers an exceptionally high cost-benefit ratio.

In order to continue its important work, the organization needs funds. It has survived for a number of years, through the generosity and far-sightedness of a small number of donors, and through satisfying donors that it was making good use of the funds received. We think that economic life is becoming harder, and that this will be more difficult in the future. This is strongly supported by the substantial drop in income the group has experienced over the past year. We are concerned that the search for funds will detract from the work that the Group is adapted to do. The need for funds for survival could distract from the work at which the Group excels: and in particular from the 'blue sky' research in which they have specialised – from uncovering and analyzing new and important areas of concern. The Group urgently needs more donors, and an assured income over longer periods. Preferably this should include a higher minimum level of funding not committed to specific projects. Without such funding, we fear that the group might have to retrench painfully – perhaps even losing valuable staff.

To help donors, we consider that ETC will need to review their mission statement (the wording, if not necessarily the substance) and objectives: and to consider how and to what extent they can meet donors' needs for further evidence that donors' funds are productively used. Given our conviction that ETC is uniquely useful and effective, this should not be a major challenge.

We recommend:

- A. that ETC seek, as a matter of urgency, to enlarge its donor base.
- B. that ETC seek to negotiate with donors more funding contracts for general support, not assigned to specific projects.
- C. that ETC consider (possibly with consultants) how better to satisfy donors, without setting irrelevant targets and diverting useful effort.

9.2. The Group should stay small

One of the strengths of the Group is that it is a small organization. This has many advantages: extreme flexibility and speed of reaction (commented on by several interviewees); short lines of communication; direct contact with the outside world (maximum surface-to-volume ratio). Being small is in part why it is so cost-effective.

We do not think ETC should aim to expand substantially. We do not see a case for a step-change in size: we think in fact that any such expansion would risk losing the special qualities that the group possesses.

However, modest expansion would be possible. There has been talk of opening an office in Africa. Given that Africa is the continent most in need of development, we regard this as an important objective for ETC, which will link ETC closer to the needs and ideas of African society. We do not see that this need disturb the Group's internal

equilibrium. However, such expansion should not take place until continuing finance can be guaranteed. It might be a project that would attract a new donor.

We recommend:

- D. that ETC maintain approximately their present size and do not seek to expand significantly;
- E. that ETC aim to open an office in Africa when circumstances permit.

9.3 The Group could benefit from more expert co-operation.

Sometimes ETC are seen as anti-technology per se, which they are not. This misperception is to an extent inevitable, given that they have to point out risks in what the introducers of new technology propose. A consensus of experts can certainly be wrong, particularly where they share a common world-view. Two of the reviewers think, however, that ETC have sometimes made too much of particular issues, where a closer liaison with experts working in the field would have reassured them, and avoided needless controversy. 'Farmers' Rights' may be one example (see above). Some independent observers felt this might also apply to nanotechnology. The point, discovered and highlighted by ETC, that little is known about the behaviour, environmental effects and health risks of nanoparticles, is only now accepted by most responsible scientists and this, according to some members of the review panel, might now provides a basis for co-operation.

We recommend:

- F. (1) ETC should strengthen its contacts among informed and critical scientists on biotechnology and nanotechnology to assist in identifying and documenting issues to inform society and promote public debate. It may want to obtain financial resources to commission background studies by respected scientists and involve scientists in debates. This is not meant to limit the freedom of ETC but to insure the highest technical and scientific quality of its documentation and public information.

What is meant by this recommendation is, that commissioned papers reflecting the views of scientists could be followed by a commentary by ETC in a dialectical manner, highlighting social and political concerns and criticism. This will clarify the position of ETC and avoid accusations of lack of understanding.

Two of the reviewers support this recommendation. One makes an alternative recommendation, as follows:

- F. (2). ETC provides analysis which requires a very complex integration of technical, political and social aspects. This capacity to deal with complexity and take a wide look is what makes its work unique and valuable; it is a characteristic that should remain as strong as it currently is. ETC has consulted with scientists in order to understand and assess different technologies, and this has certainly enriched and strengthened their analysis. ETC should not be expected to provide technical answers; its role is to make *questions* and provide well-grounded prospective analysis about the impact of technologies on society. Making good questions is therefore critical for ETC. Good questions require

independent as well as critical and complex thinking, which ETC has proved to have plenty. But good questions also require some minimum level of technical understanding of the matters studied in order to sharpen them and to critically filter the answers being provided, especially if those answering the questions have defensive attitudes, as it usually happens with biotechnologists and nanotechnologists. However, their current technical understanding has sometimes prevented ETC from asking sharper questions sooner. For example, ETC accepted for many years the concept of “junk DNA”, a concept they could have questioned long ago if their insights about ecology/evolution had been deeper. Or they could have immediately challenged the belief of nanotechnologists that there was nothing to worry about when handling nanoparticles. Hence, it is recommended that the current political skills of their staff should be further complemented with a deeper technical understanding. This does not mean that they should acquire expert knowledge, just a level that some general science courses could provide, and it is not meant to preclude consultation with technical people.

9.4 The Group can strengthen its outreach.

ETC is part of civil society and it identifies other CSOs and social organizations with similar goals as their natural partners. In turn, ETC is highly respected among CSOs and social organizations, which see it as a unique source of valuable information. Given this, it strikes as contradictory that some of the information that has gotten the widest attention (for example, Terminator) or provoked the highest impact (for example the sampling through HGDP) has not necessarily been translated into widespread or permanent action. When discussing this apparent contradiction with members of different organizations, they indicated that lack of action was linked to lack of a strategy for action, lack of coordination among different sectors. They also indicated that they already had too many areas to cover, and a new one was always difficult, but that -if the first two problems were solved- they felt effective action would be possible to undertake. Of course, ETC is not responsible for the capacity to act of other organizations, but any improvements on this aspect would certainly improve the impact of their work.

We recommend:

- G. that ETC co-organize a series of discussions with social and civil society organizations to jointly develop action strategies and identify information needs on some urgent issues they have dealt with. Given the urgency of some of these issues, and the unique contributions by ETC on them, the discussion could initially focus on:
- The future of Terminator (GURT) technologies
 - The response of society to nanotech.
 - The response of society to the advance of genomics
- They should address different possible strategies and provide ETC with a sharper picture of what their future contributions could be.

9.5 The Group needs to think about its long-term future.

Given the value which we see in the Group's work, we believe it is important that it should, if possible, continue in the longer term. The success of ETC is entirely

dependent on its staff, and in particular its two remaining founder members, the Executive Director and the Research Director. When they leave, as must inevitably happen some day, we would hope to see the Group continue its work. However, thought is needed as to how this can happen, and also planning to provide an optimal transition. This question is not urgent, but it is important. The Board needs to pursue it diligently.

We recommend:

- H. that the Board consider, in conjunction with senior staff, what needs to be done by way of succession planning, to ensure that the organization continues in the longer term to provide the kind of benefits that it has produced in the past.

9.6 Programme staff would benefit from greater administrative support.

A strong feature of the current organization is that it is lean (as well as, some opponents would say, mean). All effort is concentrated on output, rather than on internal convenience. Possibly this very desirable tendency has been carried too far. Administrative help is largely confined to the Ottawa office. The office manager there is very willing to help the other offices, but there is a limit to what can be done at a distance. Important records should be duplicated off-site.

A partly related issue is the question of the Executive Director's eyesight. It is a tribute to Pat's skills and character that few of those not in day-to-day contact with him realise that he has any problem of this kind, let alone the extent of it. He cannot read normal-sized print, and has difficulty with other visual cues.

We recommend:

- I. that ETC review the provision of administrative help, and particularly consider whether further part-time resource is needed in any office;
- J. that the provision of specific help for the Executive Director, both technical and human, be monitored to ensure its adequacy.

9.7 Other proposals

We recommend:

- K. that the website be reviewed and re-organised to make it more user-friendly. It might be effective to take external advice.
- L. that office devices be upgraded and better interconnected in the Mexican office (perhaps using a wireless network).
- M. that additional space for meetings with visitors and colleagues from co-operating organizations be provided in the Mexican office.

10. APPENDIX

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A. The Review Panel

Jaap J. Hardon

I have had a variable career, but in my various employments involvement with plant genetic resources use and conservation remained a constant factor. I am Dutch. A M.Sc degree in plant breeding from the Agricultural University of Wageningen, the Netherlands was followed by a Ph.D. from the University of California at Davis. The following 10 years I worked in Malaysia as an oil palm breeder, and started broadening the gene pool by extensive collection in West Africa and South and Central America. Upon my return to the Netherlands, and after a brief period at the van der Have Breeding Company, I joined the research service of the ministry of agriculture in charge of research cooperation with developing countries. I represented the Netherlands in the CGIAR and served on various of its committees and boards (IRRI, ISNAR) while maintaining close involvement over the years with a range of activities of the International Plant Genetic Resources Institute (IPGRI). I was the Netherlands' representative on the FAO International Commission on Plant Genetic Resources, was member of the coordinating committee of the Keystone International dialogue Series on Plant Genetic Resources and represented Europe on the US National Research Council committee on the Worldwide Status of Germplasm. Within the European Community I was a strong advocate for international cooperation in plant genetic conservation. I established and became first director of the Netherlands National Genebank. I early realized the importance of *in situ* on-farm conservation and management of genetic diversity and was involved in starting a programme of cooperation with NGOs and government institutions in a number of developing countries in Asia, Africa and Latin America pioneering farmer-participatory breeding in local landraces of various crops (CBDC). I have tried to combine technical rationale with an understanding of the political implications of control and access to genetic resources. I officially retired in 1997, but have remained active, amongst others in the debate arguing for more balanced use of patents in biological materials. This resulted in a project, funded through NOVIB on the Consequences of IPR Protected Biological Materials on Farmer Seed Systems in Developing Countries. In 2001 I received the Frank N. Meyer Medal for Plant Genetic Resources of the Crop Science Society of America.

Contact with ETC: My contacts with ETC (then RAFI) and Pat Mooney started around 1983 as the Netherlands representative at the FAO Commission on PGRFA. The policy of the Netherlands delegation was in general agreement with views expressed by the NGO representatives, including RAFI and GRAIN (Henk Hobbelink). Contacts with ETC continued in the Keystone International Dialogue Series on PGR (1988-1991) and in 1992 led to jointly being involved in the CBDC programme. Further contacts took place in the multi-stakeholder CRUCIBLE I and II programme.

Attitudes: In my involvement with NGOs, I have felt that NGOs often have valid points and that there is much potential gain from close interaction between NGO and government institutions. My concern is that many NGOs have objectives that are mainly political and use technical issues to further such objectives without sufficient technical expertise. On the other hand, government institutions have technical expertise, but lack access to farmers, understanding of social organization, participatory methods, etc. My main motivation to seek cooperation with the NGO community was the belief that there is a functional complementarity between

government institutions and NGOs. There is a need to build bridges because both sides often distrust each other and are reluctant to cooperate.

Camila Montecinos

I am a Chilean agronomist who has worked all her professional life (25 years) with small farmers. I currently work with GRAIN and do part-time teaching at the Catholic University of Temuco, my hometown. I have been part of an NGO since 1985, and through different networks I have been in touch and cooperating with NGOs and social organizations from different parts of the world (although mainly in Latin America) on issues such as sustainable agriculture, organic agriculture, biodiversity, farmers' biodiversity and seed conservation, intellectual property rights, GMO, local organizations and organizing, local rights, the impacts of FTAs on local communities and agriculture, etc.

Contact with ETC: I have known the ETC Group since 1986. It was the ETC Group (then RAFI) who introduced me to issues such as local seed conservation, IPR and biotechnology. From that point of view I feel that I have a deep debt with the ETC Group. I was part of RAFI's Board during 1989 and 1990. I resigned due to political differences: I felt that RAFI was spending too much time and intellectual effort in dialogues with the UN system, the CG and industry and not enough time in cooperating and networking with other NGOs, a situation that I considered could create confusion and lead nowhere. Our cooperation links continued anyway, mainly around the participation in and co-organization of seminars and workshops, included my participation in the Keystone Dialogue Series and the Crucible Project. Another cooperation experience was the CBDC Programme, where both ETC and my organization at that moment still participate. Another form of cooperation is the participation of Silvia Ribeiro in GRAIN's Board.

Attitudes: Although I feel a deep respect and appreciation for ETC's members and their work, I do have different political views. I definitely do not agree with their strategies regarding international fora and international agreements, and believe that their criticism of genetic engineering has not addressed some fundamental ethical problems.

Tim Roberts

CV. I'm British by birth and a chemist by academic training. I joined Imperial Chemical Industries (ICI) in 1960, and qualified as a patent attorney in 1964. I worked with ICI on pesticides from 1966 to 1987, then on seeds (including GM seeds) from 1987 to 1994. I left Zeneca (successor to the bioscience interests of ICI) at the end of 1994, becoming an independent IP consultant. I am active in professional patent circles in the UK, having been President of the UK Chartered Institute of Patent Agents (CIPA) from 2001-2002, and am currently a member of CIPA's Council. I edit CIPA's 'European Patents Handbook'. I am a member of the UK Government's Intellectual Property Advisory Committee (IPAC); and of the Appeal Board of the European Plant Variety Rights Office. In 1997-8 I chaired an international Expert Panel on Proprietary Science and Technology, for the Consultative Group on International Agricultural Research (CGIAR).

Contacts with ETC. I first met Pat Mooney in the late 80's, when we both participated in the Keystone Dialog on Plant Genetic Resources. Following that, I took part with RAFI members and others in the Crucible Group discussions that produced "*People, Plants and Patents*" (IDRC, 1994) and '*Seeding Solutions*' (IDRC, 2000). I am currently acting for ETC as a patent attorney, opposing a European patent claiming all genetically modified soya.

Attitudes. My personal positions are generally conservative and conformist - occasionally contrarian, particularly on environmentalism. I believe in technical progress, as a way to reduce hunger, misery, poverty and disease. I admire and support ETC's efforts for development and justice. I also admire their willingness to defend their positions in rational discussion with opponents, even though I believe a number of these positions are significantly mistaken. In particular, I find their ideas on intellectual property unbalanced. While there are a few ridiculous patents around, on the whole intellectual property (like physical property) is an instrument of justice, which can help to prevent the strong abusing the weak, as well as promoting technical progress.

B. Terms of Reference for the External Review

Rationale

ETC Group (ETC) began its activities in 1977 and was incorporated in 1985. It changed names from RAFI to ETC Group in 2001 in order to accommodate US charitable incorporation rules. At the same time ETC significantly expanded its field of work to include a new set of technologies and governance issues. One of ETC's key supporters, the Swedish International Biodiversity Programme (SwedBio) and ETC believe that the recent programme expansion and the maturing nature of the organization make it timely and appropriate for an external review. The review is expected to give ETC board/staff, funders and partners an important perspective on ETC's programmes and effectiveness. The information provided by the external review will be studied by ETC as part of a major strategic planning exercise.

Review Panel Members

Attached (appendix 1) is a description of the three review panel members chosen by ETC Group: Jaap Hardon, Camila Monecinos and Tim Roberts.

Mandate

- To review ETC Group's mission statement and programme commenting on the appropriateness of the mission statement and the relevance of the programme to the mission.
- To offer an overview of the historic programme activities of the Group since its 1977 origins and to comment on the value and effectiveness of the organization.
- To particularly review ETC's programme since September 1st, 2001 in view of its broadened programme activities.
- To provide an overview of ETC's organizational structure and style commenting on its appropriateness in light of ETC's mission and programmes.
- To offer any other comments or recommendations the panel as either a group or as individuals view as helpful and appropriate.

The review panel will address the following questions related to the mission, programme and organization.

Mission:

Is ETC's mission relevant?

Has ETC's choice of issues been appropriate and its predictions and analysis accurate?

Does ETC provide useful services to civil society organizations and social movements in Africa, Asia, and Latin America?

Does ETC Group influence policies or debate at the national, regional or international levels?

Does ETC Group play a role that is unique or does it duplicate efforts of other organizations?

Programme:

Given its mission have ETC's programme activities (research, writing, seminars, lobbying) been appropriate? Have ETC's tactics been appropriate?

Has ETC been effective/successful?

Does ETC spread itself too thinly in terms of the issues it addresses?

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Does ETC work at appropriate levels in appropriate ways? Is ETC too focused at the global level? Is it too focused on UN institutions? Are its contacts with rural and indigenous peoples and other marginalized or disadvantaged groups effective?

Does ETC deal with issues in a reasonable and balanced way or unnecessarily adversarial? Not adversarial enough?

Organization:

Has ETC been coherent and consistent? Have its tactics/actions been appropriate to its programmes and analysis and have these been appropriate to its mission?

What has been ETC's impact?

Given current levels of funding and resources, does ETC work efficiently?

Does ETC have appropriate human resources to manage its mandate? Is staff located appropriately?

Is the methodology of being centralized in the north effective?

Is ETC's internal communication effective?

End Product

The review panel will provide an evaluation of ETC's historic and current programme and ETC's structure. ETC's board and staff will respond to the panel's draft after which the panel may or may not wish to amend the report. A final document will include both the final text of the panel and the formal response of ETC. This final document will be published on the ETC and SwedBio web site and will be available in hard copy upon request.

Process

The review panel members will determine their own modus operandi. ETC board and staff members and offices will be accessible. Review members may request any documentation they consider necessary and it will be sent to them immediately. Where staff members have existing work or travel commitments they will proceed with these commitments. If these commitments interfere with the travel plans of the external review panel evaluation process the ETC Executive Director will work with the panel to achieve a solution.

The review panel will consult with a wide range of individuals and organizations that have come into contact with ETC Group over the years. These contacts will include civil society organizations in the South and North; officials from governments and UN agencies; donors; individuals from industry, trade associations, and scientific organizations; journalists and reporters; former staff and board members.

The three members are under no obligation to reach a consensus on any matter. Where there is agreement this will be stated. Different viewpoints will be stated independently. The panel will decide whether or not they wish to be identified with any specific comments or recommendations. Panelists can disassociate themselves from the opinions or perspectives of ETC as regarded necessary.

Timeframe

September-December 2004 Review panel conducts the review

January 15, 2004 ETC receives draft review from panel

February, 2004 ETC board and staff respond to the draft review

February 28, 2005 Panel presents final review report to ETC Group

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June 2005 Panel reports to board and SwedBio at ETC Board meeting

Budget		
<i>Review Panel</i>		
Remuneration	SK 165,000	Cdn. 28,216
Travel	43,000	7,353
Meeting & Communication Costs	32,000	5,472
<i>ETC Group</i>		
Provision of Documents, Communication, Staff time	43,000	7,353
Production and distribution of final report	7,000	1,197
<i>Contingency</i>	10,000	1,712
<i>Total Budget</i>	SK 300,000	(Cdn. 51,302)

We the undersigned agree to the terms of reference of the External Review for the Action Group on Erosion, Technology and Concentration outlined above.

Signed,

Pat Roy Mooney
Executive Director, ETC Group

Signed,

Jaap Hardon
On behalf of the Review Panel

C. ETC Board of Trustees

Tim Brodhead, Montreal, Quebec, Canada

Tim is ETC Group's President. He is President and CEO of the J.W. McConnell Foundation, and past Executive Director of the Canadian Council for International Cooperation. In 2002, Tim was named an Officer of the Order of Canada, the highest honour awarded to Canadian citizens.

Nettie Wiebe, Delisle, Saskatchewan, Canada

ETC group Secretary-Treasurer. Nettie is a farmer and Ethics Professor at St. Andrew's College, University of Saskatchewan. She is past President of the National Farmer's Union and currently serves on the executive council of Via Campesina.

Elenita Neth C. Dano, Diliman, Quezon City, Philippines

Neth is the Executive Director of SEARICE since 1998 and concurrently its Policy and Information Officer since 1995. She has academic background in development studies and community development and has spent most of her professional life in development work among farming communities and indigenous peoples in the Philippines.

Maria José Guazzelli, Rio Grande do Sul, Brazil

Maria José Guazzelli is an agronomist. She is founder and coordinator of Centro Ecológico, an NGO based in Rio Grande do Sul, the southern-most state of Brazil, that works with small farmers and promotes ecological agriculture as a tool for sustainable development.

Alejandro Nadal, Mexico City, Mexico

Alejandro Nadal is an economist and professor of Comparative Economic Theory at El Colegio de Mexico in Mexico City. Alejandro has a BA in Law from the National Autonomous University of Mexico (UNAM) and a Ph.D. in Economics from the University of Paris. He is also a member of the steering committee of IUCN's working group on environment, trade and investment policies, the Mexican Academy of Sciences, and the National Research System.

Olle Nordberg, Uppsala, Sweden

Olle Nordberg joined the Dag Hammarskjöld Foundation in 1969 after having worked for four years at the Scandinavian Institute for African Studies in Uppsala. Together with the Director at the time, Sven Hamrell, he developed the work programme of the Foundation which has resulted in over 170 seminars and more than 120 publications. In 1994, he became the Director of the Foundation. He studied languages and history at the University of Uppsala.

Dr. Gregor Wolbring, Calgary, Alberta, Canada

Dr. Gregor Wolbring is a biochemist at University of Calgary and an Adjunct Assistant Professor for bioethics at the University of Calgary and University of Alberta. He is the founder and Executive director of the International Center for Bioethics, Culture and Disability, founder and Coordinator of the International Network of Bioethics and Disability and a Member of the Ethics Working Group of the Canadian Commission for UNESCO and is a member of the Executive of the Canadian Commission for UNESCO (CCU).

Website: <http://www.bioethicsanddisability.org>

Dr. Regassa Feyissa, Addis Abba, Ethiopia

Regassa Feyissa, a physiologist and biochemist by training and is a professional in the area of genetic resources conservation and use. He worked as a germplasm conservation manager at the Plant Genetic Resources Center/Ethiopia (PGRC/E), and later as a Director of the Center, promoting the Center to the Institute of Biodiversity. Together with the earlier Director of PGRC/E, Dr. Melaku Worede, he developed the scientific basis for on-farm/ in situ conservation and enhancement as well as strategies for linking off-farm/ex situ and in situ systems for farmers' varieties (landraces), and for restoring the displaced genetic diversity. He is the founder and the Executive Director of Ethio-Organic Seed Action (EOSA), a technical NGO working on sustainable Agrobiodiversity management and use. He is also a winner of the Slow Food Award for the defence of Biodiversity.

D. Finances

For the year ended August 31, 2004, with comparative figures for 2003

	2004			2003		
Revenue	\$(CA)	% Total	% Grant	\$(CA)	% Total	% Grant
Subsidies	152,835	21.7	23.1%	282,532	30.5	28.2%
CS Fund	177,644	25.2	26.8%	205,000	22.1	20.5%
S. Goldman	-			31,000	3.3	3.1%
CIDA, Canada	-			50,000	5.4	5.0%
SwedBio, Sweden	290,645	41.2	43.9%	272,453	29.4	27.2%
HKH Foundation Grant	12,917	1.8	2.0%	76,208	8.2	7.6%
Albert A List	27,730	3.9	4.2%	33,583	3.6	3.4%
Ford Foundation	71,464	10.1	10.8%	50,000	5.4	5.0%
Consulting Fees	12,000	1.7		461	0.0	
			Total grant, 2004			Total grant, 2003
			661,771			1,000,776
Realized foreign exchange (loss)	-42,399	-6.0		-15,140	-1.6	
Unrealized foreign exchange (loss)	-14,778	-2.1		-67,694	-7.3	
Other	7,079	1.0		2,852	0.3	
Interest	2,625	0.4		1,974	0.2	
Honorarium revenue	7,075	1.0		2,513	0.3	
	704,837	100	925,742	925,742		
Expenses						
Accounting	8,093	1.2%		30,034	3.4%	
Amortization	5,424	0.8%		15,918	1.8%	
Bank charges and interest	6,940	1.0%		7,400	0.8%	
Books, printing, and distribution	22,767	3.3%		28,580	3.3%	
Consulting Fees	23,643	3.4%		29,531	3.4%	
Information and publications	-			44,622	5.1%	
Fiscal sponsorship	2,261	0.3%		-		
Insurance	3,939	0.6%		3,468	0.4%	
Meetings	45,521	6.5%		178,117	20.3%	
Office	7,751	1.1%		17,296	2.0%	
Postage and courier	5,243	0.8%		4,820	0.5%	
Professional Fees	5,182	0.7%		9,895	1.1%	
Rent	32,871	4.7%		31,112	3.5%	
Repairs and Maintenance	3,359	0.5%		1,760	0.2%	
Research	-			1,434	0.2%	
Telephone	27,663	4.0%		36,603	4.2%	
Travel	59,787	8.6%		42,773	4.9%	
Wages and benefits	437,798	62.7%		394,565	44.9%	
	698,242	100.0%		877,928		
Excess before the following	6,595	0.9%	47,814			
Relocation Expense	-17,767	-				
Excess (deficit) of revenue over expenses	-11,172			47,814		

E. Impact, ETC

September 1, 2003 to July 23, 2004

Note on this interim report: To help monitor its effectiveness, ETC Group maintains a running tally of three indicators: major (known) media coverage of its programme activities and use of its publications/analysis; noteworthy seminars and conferences either organized by ETC (usually in cooperation with other partners) or at which ETC was invited and spoke; information (books, articles, communiqués, genotypes and news releases) written by ETC staff. The following list is sorted alphabetically by the three indicators (Media, Meetings, Publications) beginning with the start of our fiscal year (September 1, 2003 to date). The Impact report is checked and finalized at the end of the fiscal year and made available on ETC’s website. In particular, media coverage tends to be underreported.

Running tally: ETC has identified 310 “events” in the 326 days thus far in the fiscal year: close to 200 media reports; almost 70 seminars and conferences; and nearly 50 publications.

Date	Event	Staff	Other Reference	City/Country
Selected Media Coverage (Electronic and print media referencing ETC programme activities)				
2-Sep-03	<i>Salon.com</i> “Nano Inc. vs. Nano Think”	ETC		
3-Sep-03	<i>BBC Radio 4</i> news	Mooney	ITDG	London, UK
3-Sep-03	<i>Neue Zürcher Zeitung</i> , “The Nanotechnology Bubble”	ETC		Germany
3-Sep-03	<i>St. Galler Tagblatt</i> , “Aggressive Dwarves”	ETC		Germany
3-Sep-03	<i>Technology Review</i> , “Full of (Soy) Beans”	Shand	Seth Shulman	Boston, USA
4-Sep-03	<i>Discover Magazine</i>	Mooney, Wetter	Clive Thomson	
9-Sep-03	<i>BBC Radio 4</i> news	Mooney		
10-Sep-03	Mexican radio “W Radio”.	Ribeiro	Carmen Aristegui	
11-Sep-03	<i>Imagen</i> national radio network.	Ribeiro	Pedro Ferriz de Con	
12-Sep-03	<i>La Jornada</i> “El homenaje al señor Lee hermanó a pueblos que sufren los mismos despojos”	Ribeiro, Mooney	Luis Hernández	
12-Sep-03	<i>Reuters</i> “Three Decades After Schumacher Is Small Beautiful?”	Mooney	Jeremy Lovell	London, UK
15-Sep-03	<i>La Jornada</i> , “En Cancún cayó el señor Lee y murió la OMC, afirman altermundistas”	Mooney	Luis Hernández	Cancun, Mexico
15-Sep-03	<i>La Jornada</i> , re: the panel discussion on nanotech, organized by the Böll Foundation & ETC Group	Ribeiro, Mooney		Cancun, Mexico
15-Sep-03	<i>Small Times</i> , “The blaring of the greens puts nano on world agenda”	ETC		
16-Sep-03	<i>San Jose Mercury News</i> , “Who's afraid of nanotechnology?”	ETC	Glennnda Chui	San Jose, USA
25-Sep-03	<i>Canal+</i> (French TV) re: Biopiracy, Enola Bean	Mooney	Marie-Monique Robin	Paris, France

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28-Sep-03	<i>La Jornada</i> , Chronicle of the panel discussion, “Frenar la globalización neoliberal”.	Ribeiro	Fabiola Martinez	Mexico City, Mexico
30-Sep-03	<i>El Universal</i> , regarding the Maize Gene Flow seminar organized by the USA/Mexico Science Foundation	Ribeiro, ETC	Guillermina Guillén	
30-Sep-03	<i>La Jornada</i> re: the Maize Gene Flow seminar	Ribeiro, ETC	Matilde Perez	Mexico City, Mexico
3-Oct-03	<i>Nature Biotechnology</i> , “Why small matters”	ETC		London, UK
4-Oct-03	Interpress Service, in <i>El Universal</i> , “La conquista de los transgénicos”	Ribeiro	Diego Cevallos	
5-Oct-03	<i>Toronto Star</i> , “Forest fires being used as natural laboratories”	ETC	Peter Calamai	Toronto, Canada
9-Oct-03	<i>La Jornada</i> on transgenic maize contamination	ETC	Matilde Pérez	Mexico City, Mexico
9-Oct-03	Press conference, publishing the results of the maize contamination	Ribeiro, Villa		Mexico City, Mexico
9-Oct-03	<i>Voz Pública</i> , Radio Fórmula	Ribeiro	Francisco Huerta	Mexico City, Mexico
10-Oct-03	<i>El Independiente</i> , on maize contamination	ETC	Thelma Geomez Durán	Mexico City, Mexico
10-Oct-03	<i>La Jornada</i> , on maize contamination	ETC	Matilde Pérez	Mexico City, Mexico
14-Oct-03	On transgenic maize contamination	Ribeiro	Reuters	
15-Oct-03	<i>El Reforma</i> , GM maize contamination and the results of the independent testing by farmers	Ribeiro		Mexico City, Mexico
15-Oct-03	<i>New York Times</i> , nanotechnology	Mooney	Barnaby Feder	New York, USA
16-Oct-03	<i>English IPS News via NewsEdge Corporation</i> , “GM corn spreading in Mexico, study finds”	ETC	Stephen Leahy	Mexico City, Mexico
20-Oct-03	<i>The Scientist</i> , vol. 17, Issue 20, “When Sharing Means Less for All: New rules on biodiversity prompt frustration with treaty”	Ribeiro	Ted Agres	Washington DC, USA
22-Oct-03	<i>The Guardian</i> , on nanotechnology	Mooney	Ian Sample	London, UK
24-Oct-03	<i>Times Educational Supplement</i> , “Nanobots and the Fear of Grey Goo”	ETC	Mark Henderson	
27-Oct-03	<i>Michigan Daily</i> , on nanotechnology	Mooney	Amar Jean	Michigan, USA
29-Oct-03	<i>Reuters</i> , on nanotechnology	Mooney	Toni Clarke	
31-Oct-03	<i>CORDIS RTD-NEWS</i> , “First large scale release of nanotechnology product into the environment provokes concern”	ETC	CORDIS RTD-NEWS	
3-Nov-03	“Intellectual Property Rights and the Life Science Industries: A Twentieth Century History”	Mooney	Graham Dutfield	

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3-Nov-03	<i>New York Times</i> , “As Uses Grow, Tiny Materials’ Safety Is Hard to Pin Down”	Mooney	Barnaby J. Feder.	New York, USA
5-Nov-03	<i>Globe & Mail</i> interview on nanotech	ETC	Martin Patrick	Toronto, Canada
6-Nov-03	Anderson Productions video on nanotechnology	ETC	Agatha Malacos	
13-Nov-03	<i>Toronto Observer</i> , interview on nanotechnology	Mooney	Andrew Steenberg	Toronto, Canada
14-Nov-03	<i>New York Times Magazine</i> on “gray goo” cartoon	Mooney, Shand	Camille Sweeny	
17-Nov-03	<i>Reason Magazine</i> , “The Smaller The Better”	ETC	Ronald Bailey	
18-Nov-03	Winnipeg’s <i>Uptown Magazine</i> interview: “A Live Radio Recording for Alternative Radio with host David Barsamian” at the West End Cultural Center	Mooney	Lorne Clement	Winnipeg, Canada
19-Nov-03	<i>Toronto Globe & Mail</i> , “Small matter provokes a major debate”	ETC	Martin Patriquin	
22-Nov-03	David Barsamian interviews for a live broadcast on an international radio slot entitled “A Live Radio Recording for Alternative Radio with host David Barsamian”	Mooney	David Barsamian	Winnipeg, Canada
24-Nov-03	Reporter of the <i>Brandon Sun</i> (Manitoba), on nanotechnology and Mooney’s history	Mooney	Craig Ellington	
27-Nov-03	phone interview	Mooney	Lesley Hughes	Winnipeg, Canada
28-Nov-03	Documentary Filming	Mooney	Lyell Shields	Winnipeg, Canada
3-Dec-03	<i>Nature Biotechnology</i> , (Book Review) <i>Intellectual Property Rights & the Life Science Industries: A Twentieth Century History</i> by Graham Dutfield	Mooney	Reviewed by Philip Grubb	
3-Dec-03	<i>Reason Magazine</i> , “The Smaller the Better”	Mooney	Ronald Bailey	
8-Dec-03	<i>Washington Post</i>	Mooney	Rick Weiss	
13-Dec-03	<i>Globe & Mail</i> , “Medical researchers are thinking small”	Mooney	Anne McIlroy	
14-Dec-03	<i>New York Times Magazine</i> , “Year in Ideas: The Gray-Goo Problem”	Mooney	Lawrence Osborne	
15-Dec-03	Documentary Filming	Mooney	Lyell Shields	Winnipeg, Canada
18-Dec-03	<i>Nature</i> , “Nanotechnology: What is there to fear from something so small?”	ETC	Giles	
20-Dec-03	“Why fighting nanotech is anti-globalization’s new cause”	ETC	Jenny Hogan	
23-Dec-03	“2003: Nanotechnology in the Firing line”	ETC	Phillip Ball	
1-Jan-04	<i>Discover Magazine</i> , “Nanoparticles Pop Up Everywhere”	Mooney	Clive Thompson	
7-Jan-04	<i>Encyclopedia of Globalization</i> , cites <i>The Big Down</i>	ETC	Michael D. Mehta	
8-Jan-04	<i>BNA</i> Washington	Ribeiro	John Nagel	Mexico City, Mexico
8-Jan-04	<i>Milenio</i> (Magazine)	Ribeiro		Mexico City, Mexico

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12-Jan-04	<i>Catholic New Times</i>	Mooney	Kevin Spurgaitis	
12-Jan-04	<i>U.S. News & World Report</i> , “Nature’s tiny helping hands” Science & Society section	Mooney	Karen F. Schmidt	
15-Jan-04	<i>Financial Times</i> , “Can we overcome nano-fear?”	Mooney	Fiona Harvey	
16-Jan-04	<i>Express Pharma Pulse</i> , “NGO for UN life sciences technology evaluation body”	ETC	Gireesh Chandra Prasad G I	Mumbai, India
24-Jan-04	<i>New Scientist</i> , “nanocorrection” (letter to the editor)	Mooney, Wetter	Letters	
26-Jan-04	<i>Milenio</i> (Magazine), “Biopiratería, el caso de México”	ETC		Mexico City, Mexico
27-Jan-04	“Gulf between rich, poor will grow if high-profile nanotechnology opponents prevail: ethics experts”	ETC	Terry Collins	
27-Jan-04	<i>Tech Central Station</i> , “Nitpicking Nanotechnology”	Mooney	Waldemar Ingdahl	
27-Jan-04	<i>Tierrameica</i> (Interpress, Latin American Environmental Service)	Mooney	Christine Espinosa	
28-Jan-04	“Will Prince Charles et al diminish the opportunities of developing countries in nanotechnology?”	ETC	Erin Court, Abdallah S. Daar, Elizabeth Martin, Tara Acharya, Peter A. Singer	Toronto, Canada
30-Jan-04	<i>Halifax Communicator</i> , “Thinking Small: Nanotechnology more than just science fiction”	Mooney	Morgan Wheeler	
30-Jan-04	‘Nano Divide’ No Small Matter	Mooney	Stephen Leahy	
1-Feb-04	<i>Washington Post</i> , “For Science, Nanotech Poses Big Unknowns”	Mooney	Rick Weiss	
3-Feb-04	<i>Popular Mechanics</i> , “The Future – and Fear – of Nanotechnology”	ETC	Christopher Allbritton	
3-Feb-04	<i>Sci Fi Magazine</i>	Wetter	Stuart	
4-Feb-04	Research Assistance	Mooney	Franziska Wolff, Institute for Applied Ecology Freiburg - Darmstadt - Berlin	Berlin, Germany
4-Feb-04	<i>Technology Review</i> “NANO’s Safety Checkup”	ETC	Ivan Amato	Boston, USA
5-Feb-04	<i>BBC</i> online – re: “The Dark Secret of Hendrik Schön”	ETC	<i>BBC-Horizon</i> (TV)	London, UK
5-Feb-04	<i>The Independent</i>	Thomas, Mooney	Geoff Lean	London, UK
6-Feb-04	<i>National Post</i> “The next big (little) thing”	Mooney	Joseph Brean	Toronto, Canada
8-Feb-04	<i>Minneapolis Star Tribune</i> , “The next big thing might be very, very small”	ETC		Minneapolis, USA

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9-Feb-04	<i>NBC</i> radio affiliate	Mooney		Monterrey, USA
10-Feb-04	“Rage Against the Machine” (preproduction interview)	Mooney	Termite Art Productions for SciFi Channel	
10-Feb-04	<i>Globe & Mail</i> , “Science losing the agitprop battle”	ETC	Stephen StrausS	Toronto, Canada
10-Feb-04	<i>Milenio Journal</i> , “México pacta TLC para trasngénicos”	Ribeiro		Mexico City, Mexico
10-Feb-04	<i>Newsday</i> , “Some see solutions, some potential danger”	Mooney		
10-Feb-04	<i>The Star Online</i> , “Maintaining tradition”	Shand	Hilary Chiew	Kuala Lumpur, Malaysia
12-Feb-04	<i>Houston Post</i>	Mooney	Josh Harkinson	Houston, USA
13-Feb-04	Vol. 9 No. 278, CBD COP-7 <i>Highlights</i> on ETC & Terminator	ETC		Kuala Lumpur, Malaysia
14-Feb-04	<i>New Strait Times (Malaysia)</i> “Monsanto, Washington get the Hook award for Biopiracy”	ETC		Malaysia
14-Feb-04	<i>The Star Online</i> , “Group presents ‘awards’ for bio-piracy”	ETC	Michael Cheang	Kuala Lumpur, Malaysia
15-Feb-04	<i>Washington Post</i> , “Nanotechnology stirs public opposition. Risks are uncharted, critics say, but backers say uses are enormous”	Mooney	Rick Weiss	Washington DC, USA
17-Feb-04	CBD Cop	Ribeiro	Fernando Carrera	Netherlands
18-Feb-04	<i>Milenio</i>	Mooney		Mexico City, Mexico
18-Feb-04	<i>New Scientist</i>	Mooney	Stephen Leahy	London, UK
20-Feb-04	“Campesinos, biodiversidad y privatización”	Ribeiro	ALAI Magazine	Quito, Ecuador
20-Feb-04	Speech, WSF Mumbai, “La souverainete alimentaire dans les mains des femmes”	Mooney, Wetter	Emile Ronchon	Mumbai, India
24-Feb-04	Governments pushing GM crops despite lack of knowledge	Ribeiro		San Francisco, USA
26-Feb-04	<i>Betterhumans</i> , “Dismissing Drexler Is Bad for Business”	ETC	Simon Smith	
26-Feb-04	<i>Forbes – USA</i> , “Mexico’s tortilla feeds debate on GM food safety”	Ribeiro	Patrick Chalmers	
27-Feb-04	<i>China Daily</i> , “Mexicans make waves over maize at meeting”	Ribeiro	Xiong Lei	Kuala Lumpur, Malaysia
28-Feb-04	<i>La Jornada</i> , “De Cartagena a Malasia: el mundo alrevés”	Ribeiro		Mexico City, Mexico

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1-Mar-04	<i>Austin American Statesman</i> , “Richard Smalley & Carbon nanotubes”	Mooney	Mark Lisher	Austin, USA
2-Mar-04	<i>CKNW Radio</i> , BC, Canada; interview for tomorrow, farmers & technology	Mooney	Julio Patora	
2-Mar-04	<i>The Star – Malaysia</i> , “On the road to safer crops”	Shand		Malaysia
2-Mar-04	<i>The Star</i> , “Farmers’ bane”	Ribeiro		Malaysia
3-Mar-04	<i>KBOO radio</i> (Oregon Radio)	Mooney	Andrew Geller	Oregon, USA
4-Mar-04	<i>Details</i> magazine about designer drugs (insomnia drug).	Mooney	Clive Thompson	
4-Mar-04	<i>Inter Press Service – World</i> , “UNEP Regional Office Urges Caution on Transgenics”	Ribeiro	Diego Cevallos	
4-Mar-04	<i>New York Times</i> on Galapagos and Venter situation	Shand	Andrew Pollack	
5-Mar-04	<i>APTN (Aboriginal Peoples' TV Network)</i> national on Biopiracy	Mooney	Rick Harp	Winnipeg, Canada
5-Mar-04	Chemistry Seminar, University of Manitoba	Mooney	Dr. Scott Kroeker	Winnipeg, Canada
5-Mar-04	Freelance reporter from Netherlands	Mooney		Netherlands
5-Mar-04	<i>New York Times</i> , “Groundbreaking Gene Scientist Is Taking His Craft to the Oceans”	ETC	Andrew Pollack	New York, USA
6-Mar-04	<i>The National Journal</i> , “Big Plans for the Smallest Science”	Wetter	Neil Munro	
10-Mar-04	<i>Betterhumans – Canada</i> , “George W. Bush Is Getting Brain-jacked”	ETC	James Hughes	
10-Mar-04	<i>Nanodot – USA</i> , “Nanotechnology's Debut on the Cereal Box!”	ETC	Gina Miller	
18-Mar-04	<i>Newsday USA</i> , “Some see solutions some potential danger”	Mooney		
29-Mar-04	News Conference: La Paz media (TV, radio, press) on new technologies economic implications for the South	Mooney	Bolivian CSO consortia, CLWR (Canada)	La Paz, Bolivia
31-Mar-04	News Conference: Cochabamba media (TV, radio, press) on new technologies economic implications for the South	Mooney	Bolivian CSO consortia, CLWR (Canada)	Cochabamba, Bolivia
3-Apr-04	News Conference: Santa Cruz media (TV, radio, press) on new technologies economic implications for the South	Mooney	Bolivian CSO consortia, CLWR (Canada)	Santa Cruz, Bolivia
4-Apr-04	<i>Reason Magazine</i> , “Patent Sense”	ETC		
7-Apr-04	News Conference: Sucre media (TV, radio, press) on new technologies economic implications for the South	Mooney	Bolivian CSO consortia, CLWR (Canada)	Sucre, Bolivia
7-Apr-04	Nanotechnology, Julian Rush <i>ch4 TV</i>	Thomas	Julian Rush	London, UK

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7-Apr-04	<i>Wired.com</i> , “Big Concern for Very Small Things”	Wetter	Stephen Leahy	
15-Apr-04	<i>IPS</i> , “Seed Treaty Boosts Farmers, Fails to Weed Out GM Crops”	Ribeiro	Stephen Leahy	
15-Apr-04	<i>Small Times</i> , “A peek into the near future finds small tech playing a role”	ETC	Candace Stuart	
16-Apr-04	<i>Wired</i> asking for lab recommendations, plant samples tested for genetic modification	Ribeiro	Joshua Davis	
17-Apr-04	<i>La Jornada</i> , “Los fulerenos, ¿solo dañan el cerebro de los peces?”	Ribeiro		Mexico City
20-Apr-04	<i>BBC Radio 4</i> – seeds & seed patents	Mooney	Clare Chadburn	London, UK
20-Apr-04	<i>UTNE Magazine</i>	Mooney	Anne Geske	
20-Apr-04	<i>Wired Magazine</i>	Mooney, Thomas	Christ Baker	
21-Apr-04	Spokane, Washington (radio)	Mooney	Annie Griffin	Spokane, USA
25-Apr-04	Documentary Film, “The Corporation,” newspaper clipping shown that mentions Terminator	Mooney		
28-Apr-04	<i>Channel 4 news</i> on nanotechnology/DNA computer	Thomas	Julian Rush	London UK
28-Apr-04	<i>Physics Today</i>	Mooney	Tony Feder	
29-Apr-04	<i>BBC Radio 4</i> , “Costing The Earth”	Thomas	Alex Kirby	London, UK
1-May-04	<i>ECO Magazine</i> , vol. 11, issue 1, “COP 7 side steps Terminator Technology – Again”	Shand		
1-May-04	<i>Global Økologi</i> (translated into Danish) “Man And Machine: Nanobiotechnology comes to life”	Mooney, Wetter		
3-May-04	<i>Science Magazine</i>	Mooney	Bob Service	Washington DC, USA
6-May-04	Interactions between CSOs and other stakeholders on sustainability related issues	Mooney	Claire Auplat (Rice U)	Houston, USA
8-May-04	<i>La Jornada</i> , “Genómica, biodiversidad y aprendices de brujo”	ETC		Mexico City, Mexico
10-May-04	<i>Congressional Reporter</i> , interview	Mooney		Washington DC, USA
11-May-04	<i>Winnipeg Free Press</i> , “Monsanto shelves plans to sell GM wheat, Activist groups claim major victory”	Mooney	Helen Fallding	Winnipeg, Canada
16-May-04	(UK) <i>Observer</i> , “Future of food”	Mooney	David Rowan	London, UK
19-May-04	<i>La Jornada</i> , “Patentar genes e investigación es hipotecar el futuro”	Ribeiro		Mexico City
21-May-04	<i>CNW</i> , “Schmeiser decision causes uproar around the world”	Mooney		
21-May-04	<i>New York Times</i> , Schmeiser Supreme Court Decision	Mooney	Bernard Simon	New York, USA
21-May-04	<i>St. Louis Post-Dispatch</i> , “Monsanto wins Canada seed patent case”	Mooney		
22-May-04	<i>IPS</i> , “Canada’s Top Court Mildly Backs Monsanto Against Farmer”	Mooney	Stephen Leahy	

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22-May-04	<i>Tuscaloosa News</i> , “Monsanto Wins Patent Case on Plant Genes”	Mooney		
22-May-04	<i>Washington Post</i> , “Monsanto Beats Farmer in Patent Fight Canadian Court Upholds Claim to Gene-Altered Seed”	Mooney	Rick Weiss, Justin Gillis	Washington, USA
24-May-04	<i>La Jornada</i> , “Para Monsanto todos somos criminales”	Ribeiro		Mexico City
28-May-04	<i>Forbes Magazine</i> , interview re: nanotechnology	Mooney, Thomas	Mike Friedman	
29-May-04	<i>New Scientist</i> , “Monsanto vs. Schmeiser”	Ribeiro		
29-May-04	Radio	Mooney	Peter Royce	
1-Jun-04	<i>La Jornada</i> , “Los nuevos biogángsters”	Ribeiro		Mexico City
2-Jun-04	<i>PHYSICSTODAY.org</i> , “Scholars Probe Nanotechnology’s Promise and Its Potential Problems”	ETC	Toni Feder	
4-Jun-04	<i>KPFA Public Radio</i> , Interview on biotech and nanotech	Shand		San Francisco
9-Jun-04	<i>Nanobot.org</i> , “Mongrel Dogs that teach” – video clips from Reclaim the Commons, San Francisco	Shand, Thomas	Howard Iovoy	
11-Jun-04	<i>Country Canada, CBC TV</i>	Mooney	Lauren Phillips	Canada-wide
11-Jun-04	<i>Small Times</i> , “McKibben Misses Opportunity by Focusing on Nonexistent ‘Bots’”	Mooney	Candace Stuart	
11-Jun-04	<i>spiked-Science</i> (online magazine) “Nanotechnology – the next GM?”	<i>The Big Down</i>	Martin Livermore	
16-Jun-04	<i>BBC Radio 4</i> , “Small Worlds”	Thomas	Phillip Ball	
17-Jun-04	<i>Env. Health Perspective</i> (US)	Mooney	Ernie Hood	
17-Jun-04	<i>Foreign Policy Magazine</i>	Mooney	Jay Singh	Washington DC, USA
18-Jun-04	<i>La Jornada</i> , “Critican ONG de 83 países informe de FAO”	ETC		Mexico City
18-Jun-04	<i>Science Magazine</i> , “Nanotechnology Grows Up”	Mooney		
20-Jun-04	<i>BBC World Service</i> , Science in Action	Thomas, ETC	Hugh Warwick	
22-Jun-04	<i>National Post</i> , “The next big scare”	Mooney	Terence Corcoran	
22-Jun-04	<i>Vancouver Co-op Radio 102.7 FM</i>	Mooney	Jay Hartling	
26-Jun-04	<i>National Journal</i> , “Administration – Who’s Minding the Nanos?”	Mooney	Neil Munro	
29-Jun-04	<i>La Jornada</i> , “Lógicas perversas y transgénicos”	Ribeiro		Mexico City, Mexico
1-Jul-04	<i>Global Civil Society 2003</i> , ref. in table of NGOs	ETC		
6-Jul-04	<i>Guardian, UK</i> , “Computerising the Body: Microsoft wins Patent”	Thomas	David Adam	
6-Jul-04	<i>National Post</i>	Wetter, Shand		
9-Jul-04	<i>IPS</i> , “Biodiversity in Danger: The Genetic Contamination of Mexican Maize”	Ribeiro	Carmelo Ruiz Marrero	
11-Jul-04	<i>The Independent on Sunday</i> , “One will not be silenced: Charles rides into battle to fight a new campaign”	Thomas, Mooney	Geoff Lean	

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12-Jul-04	<i>Cordis News</i> , “Renewed calls for assessment of nanotechnology risks”	Thomas		
12-Jul-04	<i>Guardian (UK)</i> , “Prince Sounds New Nanotech Alert”	Thomas	Tim Radford	
12-Jul-04	<i>Small Times</i> , Prince Charles Speaks on Nano Regulation”	ETC		
12-Jul-04	<i>The Times (UK)</i> , “Scientists attack Prince’s Little Grey Cells”	ETC	Sam Coates	
12-Jul-04	<i>The Times (UK)</i> , “Small number Understand Small Matter”	ETC	Sam Coates	
13-Jul-04	<i>Small Times</i>	Mooney	Candace Stuart	
14-Jul-04	<i>CBC Radio Sunday Edition</i>	Mooney	Bob Carty	Ottawa, Canada
14-Jul-04	<i>National Journal</i>	Mooney		
15-Jul-04	<i>Canberra Times – Australia</i> , “Caught in causes and effects”	ETC		
18-Jul-04	<i>Independent on Sunday</i> , “Hundreds of Firms Using Nanotech in Foods”	Thomas (background)	Heoff Lean	London, UK
19-Jul-04	<i>WIRED</i> , “Green Goo: The New Nano-Threat”	Thomas, ETC	Daithí Ó hAnluain	
July/Aug-04	<i>UTNE Reader</i> , “Nanotech Under the Microscope”	Thomas	Anne Geske	

Selected Meetings (Seminars and conferences at which staff spoke and/or organized)

9-Sep-03	WTO Ministerial: Speech to Farmers’ Forum	Mooney, Ribeiro, Villa	Via Campesina	Cancun, Mexico
10-Sep-03	WTO Ministerial CSO briefings: “Agricultural Biotechnology and GM Contamination”	Mooney, Ribeiro, Villa	Hosted by: Washington Food Forum	Cancun, Mexico
10-Sep-03	WTO Ministerial IFG Teach-in, LGM contamination	Ribeiro, Villa	International Forum on Globalization	Cancun, Mexico
9-10-Sep-03	World Nano Economic Congress	Wetter	World Nano Economic Congress	Washington, USA
11-Sep-03	WTO Ministerial: Panel “New Technological Waves,” with Jerry Mander, Vandana Shiva, Mooney, Andrew Kimbrell, Caroline Lucas, Ribeiro	Mooney, Ribeiro, Villa	International Forum on Globalization	Cancun, Mexico
12-Sep-03	WTO Ministerial: “Nanotechnology” seminar	Ribeiro, Mooney, Villa	Heinrich Boll Foundation	Cancun, Mexico
20-Sep-03	Speech on patents and nanobiotech, University of British Columbia	Mooney	UBC and University of Toronto	Vancouver, Canada
22-Sep-03	Speech “NanoBiotechnology in the Third World,” Environmental Grantmakers’ conference.	Mooney	EGA	Ottawa, Canada
24-Sep-03	Speech, “NanoBiotechnology,” IDRC	Mooney	IDRC	Ottawa, Canada
21-Oct-03	Speech, UAM Xochimilco for agronomists on GMOs	Ribeiro	Mexican CSO network	Mexico City, Mexico
30-Oct-03	Civil Society Meeting with Royal Society on Nanotech	Thomas	Royal Society (UK)	London, UK

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4-Nov-03	Speech: Environmental Funders Network - UK on Nanotech	Mooney, Thomas	JMG Foundation, <i>Ecologist</i> magazine	London, UK
4-Nov-03	Panel: World Nano Economic Congress	Mooney, Thomas	TNT	London, UK
5-Nov-03	Conference at National Institute of Standards and Technology (NIST): “Road Map for Nanotech Standards in Electronics”	Wetter	Maryland, USA	T
6-Nov-03	<i>Nature</i> on nanotech and biotech	Mooney, Thomas	<i>Nature</i> senior reporters.edit or	London, UK
6-Nov-03	Workshop: Nanotechnology for UK Food Group	Mooney, Thomas	UK Food Group, ITDG	London, UK
10-14 Nov 03	SBSTTA9 Mtg. Of CBD Terminator and GM Contamination	Shand	SBSTTA-CBD	Montreal
7-11-Nov-03	Working Group: “What Next? Discussions	Mooney	Dag Hammarskjöld Foundation	Uppsala, Sweden
12-Nov-03	Seminar: “Toward an International Convention on the Evaluation of New Technologies” ICENT	Mooney	Dag Hammarskjöld Foundation	Uppsala, Sweden
13-Nov-03	Agbiotech briefing for EU Parliamentarians, speech	Mooney	World Council of Churches, German church agencies	Brussels, Belgium
13-Nov-03	Meeting with EU officials on nanotechnology	Mooney, Thomas		Brussels, Belgium
14-Nov-03	Speech on nano-patents at European Social Forum	Thomas	ATTAC/CPE	St Denys, Paris
21-Nov-03	Speech on Biotech and New Enclosures at American Anthropological Assn. AGM	Shand		Chicago
17-Nov-03	Parliamentary and Scientific Committee of House of Commons, meeting on Regulation of Nanotechnology.	Thomas		London, UK
6-Dec-03	<i>“What Next?”</i> Working Group	Mooney	Dag Hammarskjöld Foundation	Uppsala, Sweden
8-Dec-03	Staff Meeting to Dec 10	ETC		Winnipeg, Canada
18-Jan-04	WSF Seminar: “Genetic Technologies, Corporate Power & Globalization”	Mooney, Wetter	Center for Genetics & Society	Mumbai, India
18-Jan-04	WSF Seminar: “Resisting Gene Engineering”	Mooney, Wetter	Research Foundation for Science, Technology & Ecology (RESTE) India	Mumbai, India
20-21-Jan-04	Intervention: A Seminar of Third World Economists	Mooney, Wetter	Third World Economists	New Delhi, India
5-Feb-04	Meeting with Prof. George Smith	Thomas, Mooney		Oxford, UK

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8-Feb-04	Panel: Introduction to Terminator for CSOs and International Farmers attending CBD COP7	Shand	CSO Coalition Mtg. Parallel to COP7	Kuala Lumpur
9-Feb-04	CBD Official Side-Event Hosted by ETC Group on Terminator Technology	Shand, Thomas	CBD COP7	Kuala Lumpur
11-Feb-04	CBD Speech at Side-Event, “Technology Transfer Beyond IPRs”	Shand	SEARICE, CBD COP7	Kuala Lumpur
12-Feb-04	CBD Speech on corporate concentration and Terminator – CSO-sponsored side-event in Kampung Village	Shand	CBD COP7	Kuala Lumpur
13-Feb-04	CBD Side Event: Captain Hook Awards Ceremony	Shand, Thomas	Coalition Against Biopiracy, CBD COP7	Kuala Lumpur, Malaysia
23-Feb-04	ETC Group Side-Event “GM Contamination in Centres of Diversity	Ribeiro, Thomas	CBD COP7	Kuala Lumpur, Malaysia
25-Feb-04	ETC Group Side-Event: “Nanotechnology in Food and Agric.”	Thomas, Ribeiro	CBD COP7	Kuala Lumpur, Malaysia
27-28-Feb-04	NBIC (Converging Technologies) conference	Wetter	US National Science Foundation	New York City
Mar-04	Conference: NAFTA Environment Commission Report on GM Maize Contamination	Ribeiro	Oaxaca, Mexico	E
29-Mar-04	Seminar: “New Technologies and the Economy of the South” in La Paz	Mooney	Bolivian NGO Consortia, CLWR (Canada)	La Paz, Bolivia
31-Mar-04	Seminar: “New Technologies and the Economy of the South” in Cochabamba	Mooney	Bolivian NGO Consortia, CLWR (Canada)	Cochabamba, Bolivia
2-Apr-04	Seminar: “New Technologies and the Economy of the South” in Santa Cruz	Mooney	Bolivian NGO Consortia, CLWR (Canada)	Santa Cruz, Bolivia
7-Apr-04	Seminar: “New Technologies and the Economy of the South” in Sucre	Mooney	Bolivian NGO Consortia, CLWR (Canada)	Sucre, Bolivia
14-Apr-04	lecture: “Nanotechnology and Bolivia”	Mooney	University of La Paz	La Paz, Bolivia

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30-Mar-04	Seminar: “Nanotech and Intellectual Property”	Shand	Meridian Institute, Woodrow Wilson International Center, USPTO	Washington, USA
18-Apr-04	ETC Annual Seminar: “The Global-Local Debate”	ETC	Ottawa-based CSO partners	Ottawa, Canada
20-22-Apr-04	Staff Meeting	ETC		Ottawa, Canada
22-Apr-04	Speech about maize	Villa	Casa Cultura Coyoacán	Mexico City, Mexico
23-27-Apr-04	Mexican Seed Fair	ETC		Curitiba
22-28-Apr-04	First Festival of Farmers Maize Seed Fair	Ribeiro	Vía Campesina	Curitiba
29-Apr-04	Speech: Nanotechnology to staff	Thomas	Centre for Alternative Technology	Machynellth, Wales
4-May-04	Speech: biopiracy	Villa	Escuela Antropología	Mexico City, Mexico
6-7-May-04	Via Campesina North American Meeting	Ribeiro	Vía Campesina	Mexico City, Mexico
7-May-04	Nanotech, Rosan Karakas, Oxford Said Business School.	Thomas		Oxford, UK
11-May-04	Maize network meeting	Ribeiro, Villa	Mexican CSO network	Teotihuacán, Mexico
18-May-04	Seminar: “Nanotech and Occupational Safety”	Shand	Meridian Institute, Woodrow Wilson International Center, NIOSH	Washington, USA
21-May-04	Conference: Biotech Policy in Canada, Executive Meeting	Mooney	Scientific Advisor to Prime Minister, Governance Institute, IDRC	Meech Lake, Canada
3-5-Jun-04	Reclaim the Commons Teach In - Workshops and panel talks on: GM Food and Agriculture (Ribeiro), Corporate Concentration (Shand), Biopiracy (Ribeiro) Converging technologies (Thomas, Shand), Nanotech and Food (Thomas, Shand, Ribeiro), Nanotech and Human Enhancement (Shand, Thomas)	Shand, Ribeiro, Thomas		San Francisco, USA

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5-Jun-04	Environmental engineering forum, intro to nanotech	Villa	Universidad Autónoma Metropolitana	Mexico City
11-Jun-04	Speech: SCIC 30 th Anniversary	Mooney	Saskatchewan Council for International Cooperation	Regina, Canada
11-20-Jun-04	IV Conference of Via Campesina Women Farmers' Assembly	Ribeiro	Vía Campesina	Sao Paulo
21-Jun-04	Seminar: "From Bio to Nano" Seminar at Royal Society	Thomas		London UK
21-Jun-04	Meeting involving Janine Schirmer - Strasbourg University	Thomas	Straasbourg University	London UK
25-Jun-04	Workshop: Nanotechnology - Glastonbury festival	Thomas	Festival organizers	Glastonbury, UK
29-Jun-04	Speech: "The Future of Nanomaterials" Conference "Environmental and societal implications of Nanotechnology"	Thomas		Birmingham UK
15-Jul-04	Speech: "Nanotechnology and the South"	Ribeiro	University of Costa Rica, GRAIN	Costa Rica
17-Mar-04	Dinner with HRH Prince Charles	Mooney, Thomas	HRH Prince Charles	London, UK

Selected Publications (from ETC or written by staff for other publications)

Sept/Oct-03	<i>Communiqué</i> #81: "Mulch ado about nothing?..."	ETC		Winnipeg, Canada
18-Sep-03	<i>La Jornada</i> , "Cancún, paredón y después"	Ribeiro		Cancun, Mexico
30-Sep-03	<i>La Jornada</i> , "La trampa de los servicios ambientales"	Ribeiro		Mexico City, Mexico
9-Oct-03	<i>News Item</i> , "Contaminación transgénica del maíz en México: mucho más grave" - Boletín de prensa colectivo	ETC		
11-Oct-03	<i>News Release</i> , "Nine Mexican States found to be GM contaminated"	ETC		Winnipeg, Canada
15-Oct-03	<i>La Jornada</i> , "Maíz: sexo, mentiras y video"	Ribeiro		Mexico City, Mexico
23-Oct-03	<i>News Release</i> , "Nanotech meets the Environment"	ETC		Winnipeg, Canada
1-Nov-03	"El ADN silencioso y los que no ven ni oyen pero igual hablan"	Ribeiro		Mexico City, Mexico
3-Nov-03	<i>The Ecologist</i> , "Little brother is Watching You"	Thomas		
13-Nov-03	"Exigen no levantar la moratoria a siembra de maíz transgénico"	ETC		Mexico City, Mexico
14-Nov-03	<i>News Release</i> , "Terminator Technology Debate Hijacked in Montreal"	ETC		Winnipeg, Canada

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18-Nov-03	<i>News Release</i> “Carta Abierta De Organizaciones De La Sociedad Civil”	ETC		Winnipeg, Canada
19-Nov-03	<i>News Item</i> , Open letter from international civil society organizations	ETC		Winnipeg, Canada
20-Nov-03	<i>News Item</i> , “Massive International Protest on GM Contamination of Mexican Maize”	ETC		Winnipeg, Canada
1-Dec-03	<i>Elements magazine</i> , “Toxic tide”	Thomas		
Nov/ Dec 2003	<i>Communiqué</i> #82 “Oligopoly, Inc.”	ETC		Winnipeg, Canada
20-Dec-03	“El dia en que muera el sol”	Ribeiro		Mexico City, Mexico
23-Dec-03	<i>News Item</i> , Call for Nominations! 2004 Captain Hook Awards	ETC		Winnipeg, Canada
27-Dec-03	“Mexico, Caballo de Troya de los transgénicos en America Latina”	Ribeiro		Mexico City, Mexico
4-Jan-04	“Aplican nanomateriales sobre tierras de los pueblos nativos/americanos de Tao Pueblos” http://www.gratisweb.com/antiartifici/	ETC	llavorda@anarchie.net	Argentina
12-Jan-04	<i>Communiqué</i> #82 Oligopolio, S.A.	ETC		Winnipeg, Canada
12-Jan-04	<i>Genotype</i> , ETC Group at the World Social Forum in Mumbai, India	ETC		Winnipeg, Canada
Jan /Feb 2004	<i>Communiqué</i> #83, “From Global Enclosure to Self Enclosure: Ten Years After – A Critique of the CBD & the ‘Bonn Guidelines’ on Access & Benefit Sharing (ABS)”	ETC		Winnipeg, Canada
4-Feb-04	<i>The Ecologist</i> , “Nanowatch”	Thomas		
6-Feb-04	<i>Genotype</i> , ETC Group at COP7 and MOP1 in Kuala Lumpur, Malaysia	ETC		Winnipeg, Canada
11-Feb-04	<i>News Item</i> , Open Letter on Terminator to COP7 Government Delegates in English, French & Spanish	ETC		Winnipeg, Canada
12-Feb-04	<i>News Item</i> , Captain Hook Awards Ceremony 2004	ETC		Winnipeg, Canada
13-Feb-04	<i>Genotype</i> , “Itty-bitty Ethics: Bioethicists see quantum plots in nanotech concern.... and quantum bucks in buckyball brouhaha?”	ETC		Winnipeg, Canada
26-Feb-04	<i>Genotype</i> , US-Latin Accord Undermines Biosafety Meeting In Malaysia	ETC		Winnipeg, Canada
1-Mar-04	<i>The Ecologist</i> , “Nanowatch – Nanoparticles”	Thomas		
11-Mar-04	<i>News Release</i> , “Playing God in the Galapagos: J. Craig Venter, Master & Commander of Genomics, on Global Expedition to Collect Microbial Diversity for Engineering Life”	ETC		Winnipeg, Canada
25-Mar-04	Book launch of <i>Ploughing Up the Farm: Neoliberalism, Modern Technology and the State of the World's Farmers</i> by Jerry Buckland, research funded by ETC.	Shymko	Zed Books	Winnipeg, Canada
25-Mar-04	<i>News Item</i> , “Jazzing Up Jasmine: Atomically Modified Rice in Asia?”	ETC		Winnipeg, Canada

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1-Apr-04	<i>Genotype</i> , “Nano's Troubled Waters: Latest toxic warning ...”	ETC		Winnipeg, Canada
March/April 2004	<i>Communiqué #84</i> , “Playing God in the Galapagos: J. Craig Venter, Master & Commander of Genomics, on Global Expedition to Collect Microbial Diversity for Engineering Life”	ETC		Winnipeg, Canada
3-Apr-04	Víctimas y pruebas	Ribeiro		
4-Apr-04	<i>The Ecologist</i> , “Nanocuisine”	Thomas		
16-Apr-04	Viva Mexico Spread in <i>La Jornada</i> celebrating Maize Cultural <i>Festival</i> , “10 Razones Porqué Decir No a los OGTs” April 16-25	Ribeiro		Mexico City, Mexico
1-May-04	<i>The Ecologist</i> , “Nanowatch - 10 Toxic Warnings”	Thomas		
20-May-04	<i>News Release</i> , “Canada’s Supreme Court Rules on ‘David & Goliath’ Friday: Tell Monsanto Where to Go!”	ETC		Winnipeg, Canada
21-May-04	<i>News Release</i> , “Canadian Supreme Court Tramples Farmers' Rights - Affirms Corporate Monopoly On Higher Life Forms”	ETC		Winnipeg, Canada
1-Jun-04	“Nanotechnology: Serving Society or eroding Social justice?” - Science in Public Affairs magazine.	Thomas		
1-Jun-04	<i>ETC</i> “The Little Big Down: A Small Introduction to Nano-scale Technologies”	ETC		
1-Jun-04	<i>The Ecologist</i> , “Nanowatch - nano patents”	Thomas		
May/June 2004	<i>Communiqué #85</i> , “Nanotech News in Living Colour: An Update on White Papers, Red Flags, Green Goo (and Red Herrings)”	ETC		Winnipeg, Canada
16-Jun-04	<i>News Item</i> , “Message to FAO: ‘Fight Hunger - Not Farmers’”	ETC		Winnipeg, Canada
30-Jun-04	<i>News Item</i> , “26 Governments Tiptoe Toward Global Nano Governance: Grey Goovernance?”	ETC		Winnipeg, Canada
8-Jul-04	<i>News Item</i> , “Nanotech: Unpredictable and Un-Regulated”	ETC		Winnipeg, Canada
11-Jul-04 23-Jul-04	<i>News Item</i> , “The Precautionary Prince II” <i>News Release</i> : “Rocking the Boat – J. Craig Venter’s Microbial Collecting Expedition Under Fire in Latin America”	ETC	Accion Ecologia	Quito, Ecuador

F. Sample Interviews

The following notes are taken from discussion with one member of staff:

What does ETC do?

Erosion - Combatting it in various aspects: initially of genetic resources; but following up from this, of many kinds of diversity: traditional knowledge and practices, indigenous customs, languages and the like.

Technology - watching and predicting the effects of new technology, particularly less obvious and unintended effects: calling attention to these as required. The group is not anti-technology as such, though often so portrayed.

Concentration - more and more technology is concentrated in the hands of large organizations - firms and governments. People in such organizations have specific interests on which they concentrate, and often do not recognise the larger picture. Their positions give them the power to promote their own views, and to ignore others. Concentration leads to suppression of competition, not merely in goods and services, but in ideas. 'Intellectual property' is not the only problem: other legal and technical ways of excluding competition are growing, such as contracts, label restrictions, 'Terminator' technology, anti-piracy laws. These are the "New Enclosures", that threaten to shut out ancient and valuable practices that conflict with the interests of the organizations.

How does ETC do this?

The main work of ETC is to provide a service to Civil Society - that is to say, to pressure groups, such as Via Campesina, Searice in the South, Greenpeace and ActionAid in the North. ETC seeks to guide the strategy of such groups by providing them with first-class research and analysis of emerging issues. This is horizon-scanning. Civil society groups are ETC's main clients and key audience: while ETC also communicates with journalists and the public, this is not its main task.

ETC's strengths are generating information, knowledge and analysis: this is done to a high standard. Making policy proposals on the basis of the analysis is also done effectively, though could no doubt be improved. Communication to the public at large is weaker, as this is not the group's prime function.

Civil Society views

(from a writer on development issues, based in the North)

What do you think ETC are for? "They're a ginger group. They monitor research, particularly in food and nanotech. They keep an eye on market mechanisms. They provide lots of material useful to others. They highlight problems, such as 'biopiracy', in a useful way. It's useful to challenge the way things are done. They're trying to change the system."

Which of their aims do you think most important?

I wouldn't distinguish. It's not a question of 'either/or', but of 'both/and'. They are useful in challenging the hype that always accompanies new technology. Their viewpoint helps to provide balance.

Which of their campaigns are you familiar with?

'Biopiracy', and genetic resources. In particular their campaigns against privatisation, and extension of patent rights and intellectual property regimes generally. I haven't followed the one on nanotech closely.

What else would you like them to tackle (or have tackled)?

I'd like to see them explain the link between their campaigns. To some extent, this comes under 'concentration', but more emphasis on the framework - the mix of factors that lead to concentration of power. I think this would help to put their views over.

What do you think of the means they use to achieve their ends?

I've seen their Listserve, other publications, and a CD ROM - not much printed stuff. It's professional and useful to other groups (NGOs, etc.). They've done some excellent papers, eg by Hope Shand. They're strong on 'good quick lines' (e.g., names like 'Terminator'). I think it's good to pursue some issues through the Courts - it gives an example, shows what can be done. Their public persona is somewhat aggressive, which may cause difficulties - I think some people don't realise that they can be much more reasonable in private (for example, in Crucible discussions). But this isn't necessarily a criticism - this kind of thing can be necessary. Again, both/and, not either/or.

Other comments?

The name's a bit silly. One thing I think has been very valuable has been their longterm commitment to international negotiations - for example, on the International Agreement on PGRFA. This is very hard to do, and I think they've been quite effective. They have high-calibre people - Pat and Hope. Pat's tenacity in debate and grasp of detail of treaties is impressive.