

# RESILIENCE & RESISTANCE

**25 YEARS STRENGTHENING DIVERSITY,  
CHALLENGING MONOPOLY**



**ETC GROUP**

**THE ACTION GROUP ON EROSION,  
TECHNOLOGY AND CONCENTRATION**

**BIENNIAL REPORT**

**SEPTEMBER 2001 - AUGUST 2003**

This biennial report is available for download on the Internet at [www.etcgroup.org](http://www.etcgroup.org). To order hard copies of the report, please contact [etc@etcgroup.org](mailto:etc@etcgroup.org).

On July 1, 2004, ETC Group's headquarters will move to Ottawa.

New address:

1 Nicholas Street

Suite 200 B

Ottawa, ON

Canada K1N 7B7

phone: 613-241-2267

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#### **TABLE OF CONTENTS**

|                                                                                 |    |
|---------------------------------------------------------------------------------|----|
| ETC's Mission .....                                                             | 2  |
| Letter from the President .....                                                 | 3  |
| ETC – 25 Years and Counting: A Brief History .....                              | 5  |
| Activities – 2001-2003: Erosion .....                                           | 7  |
| Beans and Has-beans – Biopiracy and CBD .....                                   | 7  |
| Summits, Seeds and Sovereignty – FAO's Trusts and Treaty .....                  | 8  |
| From Seed Conservation to Community Resilience – CBDC .....                     | 9  |
| A Poverty of Alleviation: CGIAR and International Agricultural Research .....   | 10 |
| Activities – 2001-2003: Technology .....                                        | 11 |
| Terminating Terminator, Exorcising Exorcist .....                               | 11 |
| Biotech's Degeneration – Crop Contamination in Mexico .....                     | 12 |
| The Not-so HapMap – Pharma, Genomics and Dismemberment .....                    | 12 |
| Technologies Converging at the Nano-scale – In with a BANG .....                | 14 |
| Activities – 2001-2003: Concentration .....                                     | 16 |
| Intellectual Property and Beyond to New Enclosures .....                        | 16 |
| Tough Love and the Stockholm Syndrome – Resiliency in Global Institutions ..... | 17 |
| ETC – 25 Years and Changing .....                                               | 18 |
| Acknowledgements .....                                                          | 19 |
| Board of Trustees .....                                                         | 20 |
| Staff .....                                                                     | 20 |

## ETC'S MISSION

When RAFI changed its name to ETC Group in 2001, we identified our challenge as the fight against **Erosion** of biodiversity and human rights, the monitoring of new and transformative **Technologies** and opposition to the **Concentration** of corporate and governmental power – **ETC**.

**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 biodiversity 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.

Together, diminishing biodiversity, nature-dominating new technologies and the rise of oligopolies have become the main force in political and socioeconomic affairs.

Talking to our partners in the South and around the world over the past two years has made it clear that the best and most realistic response to erosion, technology and concentration is *resilience* and *resistance*.<sup>1</sup>

The critical requirement of any healthy community (defined by land, language, culture or social movement) is resilience. Vibrant communities rely on multiple systems that allow them to respond to new opportunities and risks. A community's internal networks of knowledge and information-sharing make it possible to advance the quality of life of its members within a sound environment. Resistance is a necessary tool of resilience. Nongovernmental organizations, such as ETC Group, can play a role in helping communities and social movements take action in response to local and global developments that could benefit or harm their resilience.

<sup>1</sup> ETC wishes to acknowledge that its perspective on resilience has been extensively influenced by the work of Dr. Susan Walsh of the University of Manitoba in Canada. Her work on resilience arose from field work in many countries.

## LETTER FROM THE PRESIDENT

### **FROM SEEDS TO GENES TO ATOMS – AND FROM PROBLEMS TO SOLUTIONS**

It is hard to believe that ETC Group is more than 25 years old. When the Board of Trustees met in Winnipeg in April 2002, we discussed the possibility of marking our quarter-century anniversary with a review of our history to encourage broader public support for ETC's work. In fact, the year came and went without any annual report at all. While it is true that almost every annual board meeting begins with the declaration that the previous year was the busiest ever, ETC has never come close to the hectic pace of the past two years. Rather than taking time to celebrate our 25<sup>th</sup> anniversary, we are, instead, producing this biennial edition of our annual report.

Over the past 25 years, ETC's programme has moved "down" from seeds to genes to atoms. Work has continued in the area we sometimes describe as "RAFI *Classique*" (agricultural biodiversity, biopiracy, life patenting and biotechnology) but now also includes ETC's "*Nouveau Cuisine*" – nano-scale technologies and global governance. In the past two years, staff work has been equally divided between our *Classique* and *Nouveau* concerns.

When the Board and staff met in the spring of 2002, the work on nano-scale technologies was still very new. ETC's major concern (and it hasn't lessened today) was the contamination of Mexico's maize with DNA from genetically modified maize. By the time the Board gathered in Mexico in 2003, our first major publication on nanotechnology, *The Big Down*, had become something of a political bestseller, with reverberations from Washington to Britain to Brussels and Beijing. ETC has never received so much attention – nor so much abuse. As 2003 wore on, however, much of the abuse turned to – if not admiration – then at least acceptance of the validity of ETC's concerns about nanotech's regulatory problems and the industry's failure to engage society in a full discussion of the wider socioeconomic implications.

ETC has always been a problem-solver. In the face of crop genetic erosion, our solution was to support farm communities in conserving seeds and extending their traditional plant breeding. We worked for the creation of a political forum that could monitor genetic erosion and encourage diversity. We helped to create (finally, in 2001) an International Treaty on Plant Genetic Resources; we pressed for the creation of a global seed conservation fund (now the Global Crop Diversity Trust); for Farmers' Rights; and for FAO policy oversight over CGIAR crop germplasm. These initiatives built *resilience* into the global system.

More than anything else, resilience means diversity. For indigenous peoples and farmers, resilience includes the conservation and breeding of an immense diversity of crops and diversity in farming systems and strategies. Culture,

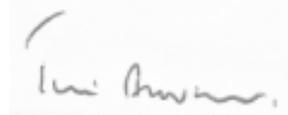


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agriculture, health, learning and security are all interwoven. Resilience is equally important at the global level. International advocacy organizations like ETC Group work to build resilience into intergovernmental bodies by providing a control mechanism for the often brittle institutions created by governments.

*Resistance* is a sub-set of resilience. It includes early warning/early listening systems and political strategy, research and organization. ETC Group's battles against intellectual monopolies and biopiracy, opposition to Terminator technologies and campaigning on nanotechnology are all examples of early warning/early listening resistance.

In the coming years, as we continue with our expanded agenda, the ETC Group will keep resilience and resistance at the forefront.

A handwritten signature in black ink, appearing to read "Tim Brodhead".

Tim Brodhead, President

## ETC – 25 YEARS AND COUNTING

### A BRIEF HISTORY

**How we began:** Twenty-five years ago the idea that would become the Rural Advancement Foundation International (and then, in 2001, ETC Group) began with a conversation about seeds. A quarter of a century later, ETC Group is still talking about seeds, but the world has grown more complex: new technologies have developed, economies have globalized, multinational companies have expanded their reach, wealth and capital are concentrated in the hands of fewer and fewer giant corporations. Life itself has been manipulated, picked apart, re-assembled – and then patented.

**What we do:** We address the socioeconomic and ecological issues surrounding new technologies that could have an impact on the world's poorest and most vulnerable. We investigate ecological erosion (including the erosion of cultures and human rights); the development of new technologies (especially agricultural but also new technologies that work with genomics and matter); and we monitor global governance issues including corporate concentration and trade in technologies. We operate at the global political level. We work closely with partner civil society organizations (CSOs) and social movements, especially in Africa, Asia and Latin America.

**Who we are:** We are six full-time and two part-time staff members and nine Board members scattered over five continents. We have offices in Winnipeg, Canada; Carrboro, USA; Mexico City, Mexico; and Oxford, UK. Despite the distance between us, we work closely together via e-mail, telephone and travel. We travel a lot.

**What we've done:** For 25 years, we have been advocates on global issues such as the conservation of agricultural biodiversity and food security and on the impact of new technologies on the rural poor. Since the early 1980s, we have conducted groundbreaking research, education and successful social action on issues involving agricultural biodiversity, biotechnology, intellectual property (IP) and community knowledge systems. In the 1990s, our work expanded to encompass social and environmental concerns related to biotechnology, biopiracy, human genomics and, in the late 1990s, to nanotechnology. ETC Group (as RAFI) was the first civil society organization (nationally or internationally) to draw attention to the socioeconomic and scientific issues related to the conservation and use of plant genetic resources, intellectual property and biotechnology.

ETC Group's international reputation has been built not merely on its effective research, but also on its unique ability to transform research into public policy and institutional change. We have challenged – and defeated – patents on crop species and human tissues. Working with partner organizations and people directly affected by abusive claims, we have successfully forced governments to

*“The Rural Advancement Foundation International (RAFI), soon to be renamed [ETC Group] is illustrative of the power of the virtual postage-stamp sized NGO. It is smart, highly wired, fast, seemingly intangible yet highly respected for its chutzpah... During its 22-year history it has run a low-cost operation with high-class knowledge management. It reaches enviable standards of efficiency and ability to market ideas.”*

- LONDON SCHOOL OF ECONOMICS,  
CENTRE FOR CIVIL SOCIETY AND THE CENTRE  
FOR THE STUDY OF GLOBAL GOVERNANCE,  
GLOBAL CIVIL SOCIETY 2001, OXFORD  
UNIVERSITY PRESS, 2001, p. 95.

*“ETC is...a group that is achieving an impact out of all proportion to their tiny size – just a few people.”*

- PHILIP CAMPBELL, EDITOR IN CHIEF OF  
NATURE, COMMENTING ON THE PUBLIC'S  
ROLE IN THE DEVELOPMENT OF  
NANOTECHNOLOGY, AT A SYMPOSIUM IN  
KARLSRUHE, GERMANY, JUNE 13, 2003.

revoke patents and have used public opinion to persuade patent owners in the US, Australia, Europe and India to surrender their exclusive monopoly claims. In the late 1970s, we were the first CSO to recognize the trend toward life patenting and the first to organize against national plant patenting laws (plant breeders' rights). In the 1990s we shattered the myth that commercial biotechnology aims to feed hungry people by bringing to public light a seed sterilization technology (dubbed Terminator by ETC Group) that threatens to extinguish the right of farmers to save and re-plant their seeds. In 2003 we are still fighting to ensure that new technologies are developed transparently and their potential benefits shared equitably and that the powerful recognize that the world's marginalized populations and ecologies are not a petri dish for technological advancement.

ETC Group has consultative status with the United Nations Economic and Social Council (ECOSOC), Food and Agriculture Organization (FAO), UN Conference on Trade and Development (UNCTAD), and UN Biodiversity Convention (CBD) and also has a long history with the Consultative Group on International Agricultural Research (CGIAR). ETC Group is a registered CSO in Canada and The Netherlands. Friends of ETC Group is a private non-profit organization under section 501(c)3 in the United States.

## ACTIVITIES – 2001-2003

# EROSION

Twenty-five years ago, ETC's work on erosion focused on the conservation of plant genetic resources and the danger to food security posed by new intellectual property regimes. Over time, we came to understand that erosion is not confined to the loss of genes, species and ecosystems, but also includes cultural erosion and the decline in human rights around the world. Much of our work on erosion takes the form of resistance. From the very beginning, we have seen that the solution to erosion is to build resiliency into community, national and global organizations. During the past two years, we have had some modest successes:

### BEANS AND HAS-BEENS – BIOPIRACY AND THE CBD

For more than a decade, ETC has worked with South partners to challenge specific instances of piracy from the patenting of human cell lines and traditional food crops from the Andes to Southern Africa. The term *biopiracy* was coined by ETC Group (then RAFI) in 1993. For more than a decade, ETC has worked with South partners to challenge specific instances of piracy from the patenting of human cell lines and traditional food crops from the Andes to Southern Africa. Whereas only a handful of indigenous peoples' organizations and CSOs were working to oppose piracy ten years ago, today there are hundreds of local, regional and international groups actively campaigning against it – and *biopiracy* has entered the political lexicon.

In April 2002, ETC Group prepared documentation and posters highlighting the most egregious cases of biopiracy for the Sixth Conference of the Parties to the Convention on Biological Diversity (COP6 of the CBD), known as the *Captain Hook Awards*. ETC – together with its longtime partner in Asia, SEARICE – worked with other partners in the Coalition Against Biopiracy (CAB) at the award ceremony in The Hague. Approximately two hundred government delegates and observers attended the popular event.

In August 2002 we participated in the Second South-South Biopiracy Summit in South Africa, where representatives of organizations working to oppose biopiracy from around the world met to exchange information and plan future campaigns.

As a direct result of ETC's biopiracy research and advocacy:

- The International Center for Tropical Agriculture (CIAT, Cali, Colombia) and FAO (Rome, Italy) challenged the "Enola" bean patent (on a traditional bean variety originating in Mexico) at the US Patent & Trademark Office; the decision is still pending.
- After two years of intense local opposition from indigenous peoples' organizations in Chiapas, Mexico, the US government's \$2.5 million biopiracy project in Mexico was cancelled.
- Responding to the demands of indigenous leaders and supported by ETC research, the Peruvian government is considering challenging US patents on maca; the International Potato Center (CIP, Lima, Peru) has also acknowledged that the patents are problematic.
- As a result of an earlier biopiracy campaign initiated by ETC Group in partnership with many CSOs, the US Patent & Trademark Office struck down 15 of the 20 claims of a US-based company's monopoly patent on South Asia's Basmati rice.

*Erosion is not confined to the loss of genes, species and ecosystems, but also includes cultural erosion and the decline in human rights around the world.*



Biopiracy has been exacerbated by the spread of national intellectual property regimes. We are concerned that the intellectual property-related provisions of the FAO International Treaty on Plant Genetic Resources could lead to increased biopiracy. We are also concerned that the Bonn Guidelines for Access and Benefit Sharing, negotiated during the CBD's COP6, will create incentives for biopiracy because they facilitate intellectual property on traditional resources and knowledge. To address these dangers, we will continue to document biopiracy and work with our partners to influence the policies of intergovernmental bodies.

## **SUMMITS, SEEDS AND SOVEREIGNTY – FAO'S TRUSTS AND TREATY**

**The Law of the Seed:** In 1981, ETC (then as RAFI) proposed the creation of a legally-binding international convention to manage the politics of plant genetic resources. In 1983, governments adopted an International Undertaking (non-binding) that eventually became the new, legally-binding International Treaty on Plant Genetic Resources for Food and Agriculture, a multilateral agreement governing the scientific exchange of vital crop germplasm. The Treaty was adopted by the FAO Conference on November 2, 2001 with no dissenting votes (Japan and the USA initially abstained) making this the first global accord of the 21<sup>st</sup> century. Twenty years in the making, the treaty represents a significant accomplishment in international relations and the best example of global resiliency work as yet undertaken by ETC. ETC Group participated in and influenced the treaty debate for more than seven years, being the only CSO invited to attend closed negotiating sessions. The treaty's weak provisions with respect to Farmers' Rights and intellectual property must be strengthened once the treaty comes into force sometime in 2004.

**Summit processes:** ETC has been an active member of the NGO/CSO International Preparatory Committee (IPC) for the FAO World Food Summits of 1996 and 2002. Although the outcome of both summits was extremely disappointing, the actual policy and programme process pursued by the IPC has been uniquely inclusive of national and global civil society and social movements – from small farmers to fisherfolk and pastoralists as well as trade unions and human rights organizations. During 2003, the IPC resolved to continue its collaboration with FAO and ETC Group has agreed to co-chair (with GRAIN and ITDG) a working committee on agricultural research and genetic resources. At the 2002 Summit, ETC was asked to prepare and present the IPC's conclusions on the structural relationship between civil society and FAO. These proposals were enthusiastically supported by the Director-General of FAO in January 2003 and now form the basis for ongoing activities.

**Farmers' Rights/Right to Food:** ETC Group believes that the national and international legal basis for Farmers' Rights and the Right to Food must be advanced through the intergovernmental working group established by the 2002 World Food Summit. These issues must also be advanced through the framework of the UN High Commission for Human Rights. ETC Group attended the NGO Social Forum on the Right to Food in Geneva, July 2002, in order to advance these proposals. During the 2002 Summit, Via Campesina presented a broad new vision of the Rights-based work under the banner of Food Sovereignty. This framework was unanimously accepted by the NGO/CSO Forum of the IPC and has also been adopted by ETC Group. In the years ahead, we will work with the

IPC, Via Campesina and others to elaborate on this approach and to press for specific initiatives at FAO.

**Trusts and consequences:** Throughout the past two years, ETC has closely monitored the FAO-CGIAR Trust Agreement, which we helped to establish in 1994. This agreement places almost 600,000 seed accessions held in CGIAR gene banks under the auspices of FAO and under the political control of the FAO Commission on Genetic Resources. Because of the new Treaty on Plant Genetic Resources, changes to this agreement may be necessary. Further, the formation of the Global Crop Diversity Trust now situated at FAO could greatly influence the financing of the CGIAR gene banks. ETC seized on the need and opportunity to increase the participation of farmers' organizations and civil society in each of these initiatives and will work in the years ahead to build greater global resilience into these agreements for the benefit of farming communities.

## **FROM SEED CONSERVATION TO COMMUNITY RESILIENCE – CBDC**

Since 1991, ETC has worked with more than a dozen national and regional partners in one of the world's most innovative resiliency research initiatives – the Community Biodiversity Development and Conservation Programme (CBDC). Over the years, the CBDC has moved beyond seed conservation to include community plant breeding and ecosystem strengthening. Anchored in community and national realities, the CBDC, nevertheless, allows for policy, practical experiences and knowledge to be shared from continent to continent and between farmers and academics, South and North.

**Policy development:** As coordinators of the CBDC's policy activities, ETC has worked to enhance the participation of CBDC members on issues relevant to agricultural biodiversity and genetic resources conservation. We have provided background research and proposals and we have made it possible for CBDC partners to attend key meetings. With facilitation from ETC Group, CBDC allies have been directly involved in processes for negotiating issues at the FAO Treaty on Plant Genetic Resources, the COP6 of the Convention on Biological Diversity, the World Food Summit and the World Summit for Sustainable Development (WSSD, Johannesburg, August/September 2002).

**Mainstreaming:** With the help of CBDC partners at COP6, we organized panels to present new developments relating to Terminator technology and maize contamination in Mexico. Working with CBDC partners we also pressed for a ban on Terminator and organized the popular Captain Hook Awards ceremony (see above, p. 7).

In a number of events, including the WSSD in Johannesburg, the World Social Forum in Porto Alegre, Brazil and the World Food Summit in Rome, we joined with CBDC partners to present the CBDC's resiliency experiences and policy work at community and international levels.



## **A POVERTY OF ALLEVIATION: CGIAR AND INTERNATIONAL AGRICULTURAL RESEARCH**

ETC Group has striven to build resilience into the Consultative Group on International Agricultural Research (CGIAR) for more than two decades. Science could play an important role in strengthening food sovereignty. Unhappily, that potential has allowed many industrialized countries to sidestep fundamental social justice issues by making the simplistic claim that science will allow the South to achieve food security. International agricultural research has, for the past 60 years, been almost entirely unmindful of the role of farmers' organizations, the relevance of gender and the critical need for integrated rural development strategies. With this perspective, ETC supported the formation of the Global Forum on Agricultural Research (GFAR) as a mechanism that could give the CGIAR a badly-needed context for restructuring.

*ETC wants to ensure that formal access to endowed germplasm collections is guaranteed; that farmers have a prominent role in determining funding; and that the endowment ultimately extends to include critical in situ collections as well.*

**The fate of the CGIAR's NGO Committee:** In the mid-90s, together with many others, ETC opposed the appointment of a CGIAR NGO Committee with a top-down approach that would make it a service unit of the CG system. Over the past two years, ETC has participated in a series of discussions with Via Campesina and other CSOs, during which ETC concluded that the NGO Committee should cease to exist. When the CGIAR held its annual meeting in the Philippines in October 2002 (the first time the meeting was held outside of Washington, DC), ETC joined with SEARICE and KMP (the Philippine peasant farmers' organization) and the members of the NGO Committee to suspend the Committee's relationship with CGIAR and to begin a process of civil society evaluation of that relationship. Led by ITDG and Food First, the NGO committee resigned and sought the advice and cooperation of the NGO/CSO International Preparatory Committee (IPC, Rome, Italy) in guiding the evaluation process. As of this writing, the process continues with the active involvement of Via Campesina, ITDG, ETC and many others.

**Global Crop Diversity Trust:** ETC Group has – since 1981 – called for the development of a global fund for the conservation of crop germplasm. Over the past four years, the CGIAR and a number of private foundations and governments have worked to establish a Global Crop Diversity Trust – a \$260 million endowment to provide long-term support to unique *ex situ* collections of crop germplasm. Although ETC strongly supports this initiative, we want to ensure that formal access to endowed collections is guaranteed; that farmers have a prominent role in determining funding; and that the endowment ultimately extends to include critical *in situ* collections as well. During 2002, ETC intervened in the development of the Trust structure when we learned that it was to be incorporated under US tax laws through a New York-based foundation. Initial proposals for the Trust made no reference to the role of the newly-created International Treaty on Plant Genetic Resources and made no policy link to the FAO Commission on Genetic Resources. Following extensive and intensive negotiations, the organizers of the Trust agreed to give policy oversight to the intergovernmental body that will manage the FAO Treaty and to place the Secretariat of the Trust under FAO in Rome. The legal basis for the Trust will not rest upon US tax laws. ETC continues to be concerned that the role of farmers is not strong enough and that the place granted to private companies is too strong. Nevertheless, we are convinced that the Trust should be supported and that further negotiations will improve the Trust's structure.

## TECHNOLOGY

### TERMINATING TERMINATOR, EXORCISING EXORCIST

ETC's work on Terminator technology is another example of resistance advocacy. More than 1.4 billion people – mostly in the South – depend upon farm-saved seed for their food requirements. Since 1998, together with hundreds of CSOs, farmers' and indigenous peoples' organizations worldwide, ETC Group has campaigned for a global ban on "suicide" seeds (Terminator plants are genetically engineered to render the harvested seed sterile). They were developed to maximize industry profits by forcing farmers to purchase new seeds every growing season.

**Ban plan:** As a direct result of our international advocacy campaign, Terminator technology was on the agenda at the CBD's COP6. Despite a strong effort by the Philippines, India and the Africa Group, COP6 failed to support a total Terminator ban. However, COP6 reaffirmed a partial moratorium and also established an *ad hoc* technical expert group to analyze the potential impacts of suicide seeds. ETC Group participated on the expert panel, which convened in Montreal in early 2003. In 2003 ETC also produced "Terminator Technology – Five Years Later," a report on new developments and controversies related to genetic seed sterilization. The report includes policy recommendations for the February 2004 meeting of COP7 in Malaysia, where ETC Group will continue to press for a ban.

Over the past two years, ETC Group conducted workshops on Terminator for government delegates and civil society at key intergovernmental meetings: WSSD Prep Coms in New York; CBD in Montreal; COP6 in The Hague; World Food Summit in Rome; and at WSSD in Johannesburg. Over 10,000 copies of a "Terminate Terminator" brochure were produced and distributed in English, Spanish and German.

**Ongoing research:** Over the last two years the seed industry has begun to promote Terminator technology as a biosafety tool for containing unwanted gene flow from genetically modified plants. Industry argues that engineered sterility offers a built-in safety feature for GM plants because if genes from a Terminator crop cross-pollinate with related plants nearby, the seed produced from unwanted pollination will be sterile – it will not germinate. There is growing evidence that escaped genes from GM plants are causing genetic contamination and posing threats to agricultural biodiversity and the livelihoods of farmers – especially in Third World centres of crop genetic diversity. The very companies whose GM seeds are causing unwanted contamination are now insisting that society must accept their new and untested technology to contain genetic pollution.

In 2002-2003, ETC discovered a new seed industry strategy that we dubbed the "Exorcist" – a technology designed to excise the GM trait from the plant prior to harvest, which would allow farmers to save their seed. But farmers would have to pay for the chemical-inducer that would trigger the exorcism, a dangerous strategy that would increase farmers' dependency on proprietary chemicals.

Contrary to what some companies have pledged in the past, the Gene Giants continue to develop and refine genetic seed sterilization technology. On January 31, 2002 ETC Group announced the discovery of two new Terminator patents – one patent held by DuPont (the world's largest seed corporation) and the other held by Syngenta (the world's largest agrochemical corporation). We continue to monitor patent applications and seed industry trends.

*"And after the Terminator came the Exorcist. This was a method of killing off alien genes at the end of the plant's life cycle so that they do not appear in the pollen or the seeds and, therefore, cannot be passed to a wild relative or the next generation. The method was immediately dubbed 'The Exorcist' by the masterful headline writers of the action group ETC."*

- PETER PRINGLE, *FOOD, INC.*, SIMON & SCHUSTER, 2003.

## BIOTECH'S DEGENERATION CROP CONTAMINATION IN MEXICO

The majority of ETC Group's work on biotechnology over the past 24 months relates directly to the contamination of GM maize in the Meso-American centre of genetic diversity. Mexican indigenous peoples' organizations and farmers' organizations have worked closely with ETC Group not only to address the immediate problem of genetic pollution from GM crops, but also to urge global institutions to recognize that the crisis of GM contamination could spread to other centres of crop genetic diversity.

Early in September 2001, ETC received confirmation that scientists at the University of California at Berkeley had evidence of gene flow from genetically modified maize to traditional Mexican maize varieties. Since the mid-1990s, crop geneticists have worried that GM contamination could arise in a crop's centre of diversity with unpredictable consequences. For many scientists and indigenous farming communities, GM maize contamination represents the ultimate threat to food security. ETC Group followed the debate closely and provided extensive information and analysis for Mexican communities, CSOs, policy- and opinion-makers and farming organizations around the world. With Mexican partners, ETC's Mexican office organized a major seminar on the subject in Mexico City. At the seminar, Mexican government authorities again confirmed GM contamination and provided data showing that rates of gene flow into local farmers' varieties were as high as 35% in some regions. Following the seminar, ETC coordinated a coalition of civil society organizations and social movements to approach FAO and CGIAR to demand international action to halt and reverse the contamination and for additional studies to evaluate the long-term implications of contamination in Mexico and in other crop centres of diversity. Once again, key officials refused to act. By the summer of 2003, however, virtually every maize scientist in the world was prepared to acknowledge (at least privately) that contamination had taken place in Mexico. Many scientific organizations were scandalized at the failure of the CGIAR to act in defense of Mexican farmers.

Together with many Mexican CSOs, ETC organized a major civil society event in Mexico to share information about maize contamination and strategies to confront the issue. A seminar, "In Defense of Maize," was held in January 2002, with representatives from more than 400 indigenous, farmer and civil society organizations. Toward the end of our reporting period, Mexican communities, supported by ETC and others, have been conducting their own genetic studies to measure the extent of contamination in farmers' fields. This resistance work continues to be among the most important activities on the ETC agenda.

*For many scientists and indigenous farming communities, GM maize contamination represents the ultimate threat to food security.*



ERIC DROOKER, WWW.DROOKER.COM

## THE NOT-SO HAPMAP – PHARMA, GENOMICS AND DISMEMBERMENT

ETC's resistance work took an unexpected turn in 1993 when we discovered (accidentally) that human cell lines of indigenous people were being patented by agencies of the US government. In one of our most successful resistance campaigns, we had three patent claims dropped and the US government was forced to modify its patent policy. In the ten years since, we tracked the Human Genome Diversity

Project and, as a result of global resistance from indigenous peoples' organizations, saw it suspended for ethical and organizational failures. We continue to apply our resistance research in monitoring other genome mapping, biowarfare developments and medical research that could work against the interests of the world's most vulnerable people.

**Agenda-setting:** ETC Group published "The New Genomics Agenda: A Political Epilogue to the Book of Life – Update on Pharmaceutical Multinationals and the Human Genome" in October 2001. The research drew civil society and government attention to the implications of new genomics information and technologies for marginalized groups and for democracy. The major findings in the research are that the world's poor, indigenous and disabled communities are the preferred targets for medical investigation and experimentation. However, these groups – especially the indigenous and disabled – are rarely consulted and seldom benefit from the process: they become "dismembered" from society. At regional seminars in Thailand, Chile and South Africa (organized by ETC with its CBDC regional partners), the "New Genomics Agenda" was presented and discussed. Our research on this issue has strengthened our ties to disability rights organizations, whose representatives made presentations at all of the workshops.

**China syndrome:** In China, ETC Group's work has been important, though largely behind-the-scenes. A former Harvard researcher requested our assistance after she filed an official grievance related to Harvard's collection of human DNA from poor people in rural China. We filed numerous freedom of information (FOI) requests from the US government's National Institutes of Health and we shared our files and analysis with the *Washington Post* and *Wall St. Journal* (both newspapers published investigative pieces on the subject). In March 2002 the US Office for Human Research Protection (OHRP) concluded that 15 Harvard-affiliated genetic studies in China were improperly monitored and failed to ensure the safety of the Chinese people who participated. In response, Harvard was forced to suspend its China studies.

**HapMap:** In 2002, ETC became concerned about a new initiative launched by the pharmaceutical industry and the US National Institutes of Health. Dubbed the "HapMap Project," the initiative has expanded to include the participation of the governments of China, Canada, Brazil, Great Britain, Mexico and Nigeria and will involve DNA sampling of indigenous peoples and other populations around the world. The \$100 million, three-year project is intended to map blocks of variation in the human genome that are unique to distinct populations (the variant blocks are called haplotypes). These genetic variations are believed to determine how people differ in their risk of disease or their response to drugs. While the HapMap Consortium has agreed not to patent the haplotypes themselves, they will be free to patent any research that is derived from collected DNA. ETC believes that this project should not be carried out in the absence of full, informed consent and in the absence of intergovernmental oversight. At the end of the reporting period, ETC Group began to work with indigenous peoples in the countries involved to provide necessary information and create an opportunity for discussion.



*“ETC Group, a Canada-based social-advocacy organization, wants a global moratorium on nanotech research until health, safety and environmental tests are carried out. It was ETC Group’s research into dangers of nanotech that stirred Prince Charles to intervene.”*

- TIME, MAY 12, 2003

## TECHNOLOGIES CONVERGING AT THE NANO-SCALE – IN WITH A BANG

*ETC Group believes that nano-scale convergence will become the operative strategy for corporate control of both organic and inorganic matter in the 21<sup>st</sup> century.*

Just as biotech came to dominate the life sciences over the past two decades, ETC Group believes that nano-scale convergence will become the operative strategy for corporate control of both organic and inorganic matter in the 21<sup>st</sup> century.

Whereas genetic engineering gave scientists the capacity to break the species barrier – to transfer DNA to and from unrelated organisms – nanotechnology is allowing scientists to shatter the barrier between living and non-living. By 2000, our resistance research led us to nano-scale technologies and, from there, to the merging of biotechnology, informatics, nanotechnology and cognitive science. The US government is promoting technological convergence at the nano-scale as a way to “improve human performance.” They call it NBIC (nano, bio, info, cogno). We call it “The Little BANG Theory” since the basic units of all NBIC technologies – Bits (info), Atoms (nano), Neurons (cogno) and Genes (bio) – add up to BANG. We began publishing our research in this field in 2002.

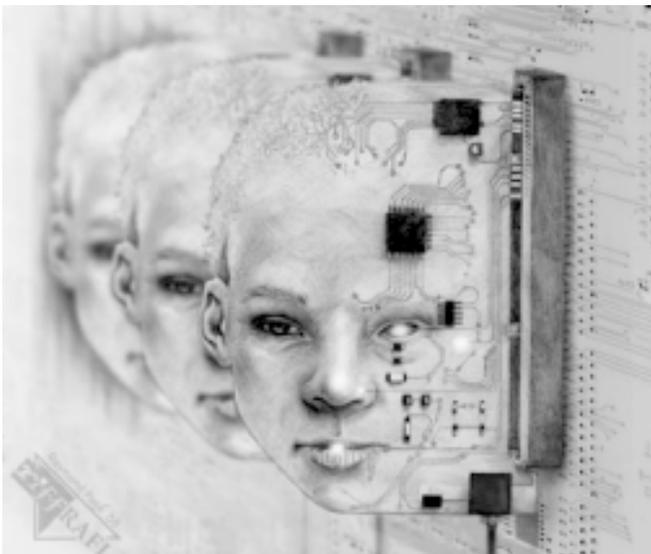
Nano-scale technologies have already received billions of dollars of research money. And in the last decade, products have been introduced into the market in the absence of societal discussion or governmental regulation. These technologies are fostering new industries, which may affect everything from food security to biodiversity and even challenge our definition of being human.

Over the past 24 months, in cooperation with CBDC partners, we have held seminars to further civil society’s understanding of converging technologies. In mid-September 2001, the ETC Group and SEARICE (The Philippines) organized the Asian ETC seminar in Thailand. Despite the events of September 11, the seminar was attended by 37 participants from 12 countries. With CET-Sur, our regional partner in Latin America, the second regional ETC seminar was held in Temuco, Chile in November 2001. The seminar was planned to coincide with a national meeting of Mapuche women farmers. In total, 52 people from 13 countries participated. In December 2002, ETC Group and BioWatch South Africa co-hosted a third seminar in Cape Town.

ETC Group continues to conduct new research on nano-scale technologies, with surprising results. The May/June 2002 issue of the *ETC Communiqué* entitled, “No Small Matter! Nanotech Particles Penetrate Living Cells and Accumulate in Animal Organs,” examines the potential health and environmental impacts of new nanomaterials, reporting on unforeseen and unexpected

consequences associated with the nano-scale particles, which had been ignored in the mainstream media. Our report generated media attention, including articles in the *New York Times*, *Time*, *AP Wire*, and *Financial Times*.

On January 29, 2003, ETC Group released *The Big Down: Atomtech – Technologies Converging at the Nano-scale*, the first comprehensive and critical analysis of nanotechnology for civil society and policymakers. The 80-page report sought to widen civil society and policymakers’ focus beyond biotech and genetically engineered crops to the consequences of new technologies that are converging at the level of the nanometer. *The Big Down* has become a catalyst for widespread public debate on the societal impacts of nanotechnology – a debate that ETC continues to lead. *The Big Down* was translated into



REY PAGE

Spanish and presented at a seminar attended by over 350 people at the National University (UNAM) in Mexico City in May 2003, with the participation of Mexican researchers. The event ignited a public debate in Mexico, the Latin American country where nanotech is most developed.

**Precautionary Prince:** Public awareness of nanotech began to grow further in the spring of 2003 when Court officials told the British media that Prince Charles was concerned about nanotechnology. The Prince's staff said that HRH's interest had been stimulated by reading *The Big Down*. This led to articles and editorials throughout the English-speaking media.

In June 2003, ETC Group, together with the Greens in the European Parliament, the Dag Hammarskjöld Foundation, Greenpeace, Clean Production Action and Genewatch UK, organized the first seminar on nanotechnology in the European Parliament in Brussels, aiming to introduce the issue and demonstrate the urgent need for policy makers and civil society to address the social, economic and environmental implications of nano-scale technologies. The seminar was followed by a daylong strategy meeting for European CSOs to adopt plans and actions for addressing nanotechnology in their own work. At the same time, the British Prime Minister agreed that the Royal Society should undertake a one-year study of nanotechnology. Also in June 2003, the Woodrow Wilson International Center for Scholars began a series of informal discussions with US regulatory agencies to consider appropriate regulations for nanotechnology in the United States. By the end of our 2003 fiscal year, the European Parliament had commissioned studies on the potential impact of nanotechnology.

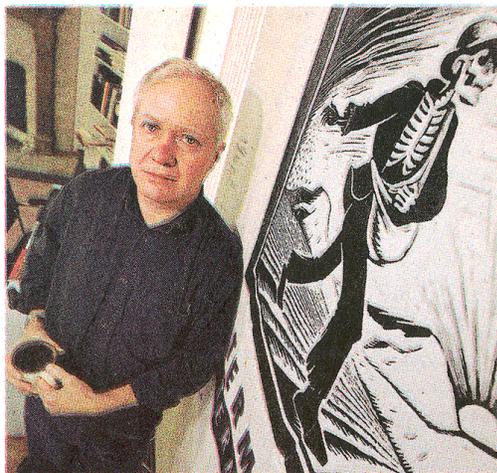
*ETC Group's The Big Down has become a catalyst for widespread public debate on the societal impacts of nanotechnology – a debate that ETC continues to lead.*

## The New York Times

MONDAY, FEBRUARY 3, 2003

### *From Nanotechnology's Sidelines, One More Warning*

By BARNABY J. FEDER



Linda Spillers for The New York Times

Pat Roy Mooney of the ETC group says he fears microorganisms altered through nanotechnology could get out of control.

The ETC group releases nervous commentary on nanotechnology in the same way a lot of companies update their software: each version is compatible with what was said before but adds new features.

The latest effort by ETC — which pronounces its name “et cetera” — is an 80-page illustrated manifesto called “The Big Down,” its most elaborate effort yet to generate alarm among the global network of social, labor and environmental groups.

Nanotechnology refers to the manipulation of matter at the scale of atoms and molecules to create novel forms of common materials, like carbon molecules arranged in nanotubes, which are 100 times as strong as steel but much lighter. Proponents describe a future in which nanotechnology will lead to other wonders, like minute diagnostic systems to detect cancers when they are no more than a few cells in size, or data-storage systems that could contain the Library of Congress in a device the size of a sugar cube.

But “The Big Down” warns of the risks of allowing big business to pursue and promote technologies whose health and environmental consequences may not be fully understood.

The rhetoric is hardly dispassionate. “Today,” it warns, “mighty Goliath (industrial corporations) has learned his lesson and is exploiting the power of small to become mightier still, while little David (society) cannot even see his opponent.”

That might all seem like ignorable fringe-group ranting if ETC

*Continued on Page 3*

## ACTIVITIES – 2001-2003

# CONCENTRATION

ETC Group believes that campaigns to challenge intellectual monopolies must keep pace with new trends in science, technology and concentration of corporate power.

### INTELLECTUAL PROPERTY AND BEYOND TO NEW ENCLOSURES

**Specious claim:** Discovered by ETC in 1994, European Patent 301,749 is an exceptionally broad “species-wide patent,” which grants its owner, Monsanto, exclusive monopoly over all forms of genetically engineered soybean varieties – irrespective of the genes used or the transformation technique employed. Civil society and farmers’ organizations worldwide opposed the patent as morally unacceptable and technically invalid. ETC filed a legal challenge to the patent in 1994, though the oral hearing to determine its fate was not held until nine years later – in May 2003. Despite expert counsel representing ETC Group, the EPO tribunal ruled in favour of Monsanto and upheld the patent. Monsanto now controls virtually 100% of the world’s genetically engineered soybeans covering 36.5 million hectares in 2002 – over half of the world’s total soybean area. ETC Group and others will appeal the EPO decision.

**Enclosing the parts of life:** ETC Group believes that civil society must broaden its “No Patents on Life” strategy. With nano-scale technologies the capacity of scientists to manipulate matter is moving down from genes to atoms. The raw materials for nanotech are the chemical elements of the Periodic Table. Atomic-level manufacturing provides new opportunities for sweeping monopoly control over both animate and inanimate matter – the building blocks of the entire natural world. The United States has already granted two patents on elements in the Periodic Table and US patent attorneys describe nanotech as the “Wild West” of intellectual property.

**New Enclosures:** Our research has revealed that corporations are developing a variety of new mechanisms to secure monopoly control of nanotech and other emerging technologies. These new mechanisms – “New Enclosures” – will supplement or even supplant intellectual property as a means of corporate domination. The November/December 2001 *ETC Communiqué* entitled, “New Enclosures: Alternative Mechanisms to Enhance Corporate Monopoly and Bioserfdom in the 21<sup>st</sup> Century,” was our first major research publication on this issue. New Enclosures threaten to erode human rights and democratic dissent and jeopardize global food security. At regional ETC seminars in Thailand, Chile and South Africa, we used our analysis to introduce and explain the concept of “post-patent monopolies.”

**New strategies:** Among the new strategies being devised by corporations are biological controls (such as Terminator) that make patents unnecessary since it becomes biologically impossible for others to utilize the company’s product. Still other strategies extend the use of contract law to straightjacket farmers into legally-binding agreements that were unheard-of one decade ago. Most worrisome of all is the requirement for new corporate/government alliances intended to protect “national security” and defend against “bioterrorism.” Armed with powerful, new nano-scale technologies, companies may argue for highly-biased government intervention that protects the interest of the corporation while, ostensibly, protecting the interests of the state.

*Atomic-level manufacturing provides new opportunities for sweeping monopoly control over both animate and inanimate matter –the building blocks of the entire natural world.*

## TOUGH LOVE AND THE STOCKHOLM SYNDROME – RESILIENCY IN GLOBAL INSTITUTIONS

During 2002, governments and civil society survived three summits – in Monterrey, Rome, and Johannesburg. Recognizing that 2002 marked the 30th anniversary of the original Stockholm Conference on the Human Environment, ETC undertook an internal evaluation of its relations with the United Nations. We concluded that much of the work done by CSOs does not address the central governance issues that incapacitate intergovernmental institutions. Secondly, we concluded that a new structural relationship between local and global CSO actors could improve social interventions at the UN and national levels. In some ways, this represents “new territory” for ETC, but it also relates to the work we have been doing at FAO, CGIAR and the CBD for a quarter-century.

**Stockholm:** Perhaps our most controversial (but also well-received) contribution to civil society’s own debates over the role of the UN System and global governance came in the form of an ETC Group release, “Stop the Stockholm Syndrome,” in which we evaluated the role of CSOs over the past 30 years and proposed radical changes in the attitude and participation of civil society in UN summits. The Stockholm Syndrome analysis was presented and elaborated during and after the World Social Forum in Porto Alegre in January 2002. ETC proposed that civil society should reject participation in UN summits unless we can find effective ways to make our critiques and alternatives a factor for serious discussion and to make delegates and governments accountable for their decisions in much more precise ways.

**World Social Forum:** In analyzing the Stockholm Syndrome, ETC gave considerable importance to the evolution of the World Social Forums (WSF) as excellent opportunities to bring new issues to civil society and social movements and to strengthen their networks. In 2002, ETC Group participated in more than a dozen seminars and workshops at the WSF. In 2003, the number of workshops – and the number of attendees – increased dramatically. A major seeds event organized by Via Campesina brought together more than 25,000 delegates and gave ETC an opportunity to present not only our work on genetic resource conservation but also our vision of the ways new technologies will affect farmers in the future.

**New Studies:** During the reporting period, ETC Group undertook (in collaboration with Dr. Jerry Buckland of the University of Winnipeg) two new studies, “The State of the World’s Farmers” and an institutional analysis of global governance titled “Good/Grief Governance.” The studies will be published in 2004 and represent a significant new contribution by ETC Group in this field.

**WSSD:** ETC Group prepared for the World Summit on Sustainable Development (WSSD) at many different levels, ranging from participation in civil society discussions as well as in Prep Coms and other official meetings. ETC put forward the need for new international conventions, such as ICENT (International Convention for the Evaluation of New Technologies), and proposed a UN Genomics Summit and a United Nations Human Rights/Erosion Inventory. ETC also participated in the process of discussing the “Joburg Memo,” coordinated by the Heinrich Böll Foundation, a compilation of debates and proposals on

*ETC proposed that civil society should reject participation in UN summits unless we can find effective ways to make our critiques and alternatives a factor for serious discussion and to make delegates and governments accountable for their decisions in much more precise ways.*



sustainability, from South and North, which was later presented and discussed at the Global Forum parallel to the WSSD.

At the WSSD in Johannesburg, we held five workshops dealing with new technologies, the “Stockholm Syndrome” and the results of the CBDC. We played an active role in the People’s Earth Summit, and also hosted an information booth at the NGO Global Forum. (ETC produced and distributed over 1,000 copies of a CD containing a selection of our recent publications in Spanish and English, entitled “Everything you wanted to know about the 21<sup>st</sup> Century and were afraid to ask!”) We also participated in activities organized by Via Campesina and other organizations in Africa, as well as in a meeting of social movements related to the WSF. Additionally, ETC staff spoke on dozens of panels and seminars organized by other CSOs. On the final days of the Summit, we co-organised a walkout of official delegates and NGOs and a public demonstration. ETC Group was widely quoted by international press, including CNN, BBC, *Le Monde*, among others. We took part in a special 2-hour TV debate on GMOs (“Down to Earth”) produced by the largest South African TV channel, which was later broadcast to other African countries, reaching an estimated audience of 26 million people.

## **ETC – 25 YEARS AND CHANGING**

The pulls between consistency and change – and between RAFI *Classique* and ETC *Nouveau Cuisine* – are felt within the staff and the way we work. While some staff members have been with ETC from the beginning (Pat Mooney and Hope Shand), others have come and gone. In 2002, we lost Beverly Cross who had been our Office Manager (including researcher, editor and virtually every other role) for 20 years. Bev left us to marry a dairy farmer in South Australia. We wish her well and we miss her. Before she left, Bev found Charlie Shymko to take her place and it has all managed to work out remarkably well! About the same time, we lost our Québec-based programme manager, Julie Delahanty, to the bright lights of the Canadian International Development Agency. It was not until the end of 2002 that we were able to entice Jim Thomas to join us and set up an office in Oxford, UK. Meanwhile, Silvia Ribeiro, who after four years with ETC seems like a long-time veteran, has found extremely able support in both research and organization in the form of Verónica Villa. Verónica now works with Silvia on a part-time basis in Mexico City. Kathy Jo Wetter, who joined ETC in 2001, has moved from part-time to full-time and now works alongside our Research Director, Hope Shand, doing programme work on every aspect of the ETC cuisine. For all of these changes, ETC continues to be six full-time and two part-time workers.

## ACKNOWLEDGMENTS

None of the work described in this report would be possible without the programme partnerships and/or financial contributions of old and new friends. We sincerely thank the following organizations – both longtime supporters and new partners – for their inspiring work, friendship and support.

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Albert A. List Foundation

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Community Biodiversity Development and Conservation Program (CBDC) Partners:

Assesoria e Servicos a Projetos em Agricultura Alternativa (AS-PTA, Brazil)

Can Tho University (Vietnam)

Centre for Genetic Resources the Netherlands (CGN, the Netherlands)

Centro de Investigacion, Educación y Desarrollo (CIED, Peru)

Centro de Educación y Tecnología para el Desarrollo del Sur (CET-Sur, Chile)

Community Biodiversity Action Network (CBAN, Sierra Leone)

Community Technology Development Trust (CTDT, Zimbabwe)

Hug Muang Nan Network (Thailand)

Institut de l' Environnement et de Recherches Agricoles (INERA, Burkina Faso)

Instituto Mayor Campesino (IMCA, Colombia)

Centre for International Environment and Development Studies

(NORAGRIC, Norway)

South East Asia Regional Initiatives for Community Empowerment

(SEARICE, the Philippines)

Unitarian Service Committee of Canada (USC-Canada, Mali)

CS Fund

Dag Hammarskjöld Foundation

Foundation for Deep Ecology

Educational Foundation of America

Ford Foundation

Greenville Foundation

Heinrich Böll Foundation

HIVOS

HKH Foundation

IDRC (International Development Research Centre)

JMG Foundation

Mexican Programme Partners:

Centro de Estudios para el Cambio en el Campo Mexicano (CECCAM)

Unión de Organizaciones de la Sierra Juárez de Oaxaca (UNOSJO)

Asociación Jaliscience de Apoyo a Grupos Indígenas (AJAGI)

Centro de Análisis Social, Información y Formación Popular (CASIFOP)

Norwegian Development Fund

Philanthropic Collaborative

Rockefeller Foundation

Sol Goldman Charitable Trust

Sida (SwedBio)

UNDP Human Development Report

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### **Mexico DF, Mexico**

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