

Seedling

Biodiversity, Rights and Livelihood



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GRAIN



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Genetic Resources Action International (GRAIN) is an international non-profit organisation which promotes the sustainable management and use of agricultural biodiversity base on people's control over genetic resources and local knowledge. To find out more about GRAIN, visit our website at www.grain.org

Seedling

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20 years of Seedling

Welcome to the new *Seedling*! Twenty years is a long lifetime for an NGO publication – and we decided to celebrate the anniversary by giving our small quarterly a facelift. We hope you like it.

The first *Seedling* we have on file is dated June 1982. It was two pages long, carbon copied, hard to read, printed on flimsy paper to save on mailing costs, and mailed to the two dozen or so seed campaigners that existed in the world in those days. That particular issue talks about the debates in several industrialised countries on whether Plant Variety Protection (PVP) laws should be allowed (see box on p6). It notes with concern that multinational companies are greedily buying up seed houses and that, together, the ten biggest corporations already control \$US 2,000 million in global seed sales. It features a news piece about a bunch of consultants getting together in the UN Organisation for Food and Agriculture (FAO) to discuss the elements of a legally binding seed treaty – a convention to govern access to genetic resources.

Sound familiar? Now – twenty years later – concern over PVP legislation continues, as its negative impact on plant breeding and sustainable agriculture becomes increasingly clear. But is also being overshadowed by the outright patenting of life forms, which is an increasingly acceptable practice,

especially in industrialised countries. Today, virtually all independent plant breeding has disappeared, and the world's two biggest seed companies *each* command close to \$US 2,000 million in seed sales. And last year – almost 20 years after the first talks about an international seed treaty – one was finally agreed upon by the FAO. Although it was not discussed in that first *Seedling*, another sobering reality is that one of the most serious threats to global food security predicted twenty years ago has recently been realised. Genetically modified crops have been found contaminating the heart of the centres of diversity – thereby threatening the foundations of agriculture.

The world of biodiversity has both changed a lot and soberingly little during the twenty years that *Seedling* has been in production. When GRAIN was founded, there were precious few NGOs, governments – or indeed any other institutions – aware of or involved in the discussion on control, loss and the management of biodiversity. But since then, international concern over biodiversity management has moved from virtually non-existent to centre stage of the political agenda.

While twenty years ago it was hard to find a policy maker interested in this issue, now it is difficult to find an environment or development agency that does not have biodiversity on its list of priorities. But, of course, the increased attention



to biodiversity-related issues does not necessarily translate into dealing with the core of the problem. The reality is that, despite the many international biodiversity-related agreements drawn up in the past decade, we are now moving faster towards the destruction of biodiversity and our planet than ever before.

Over that period, GRAIN itself has also gone through a transformation. GRAIN's primary role in its early years was to call attention to the root causes behind the destruction of biodiversity and its impact on the future of agriculture. It aimed to promote discussion on these issues in national and international fora, and to serve the few groups that were getting involved with information, communication and networking support. While many of these basic functions are still part of our work, we are now moving beyond this "*small world*" way of functioning and are expanding our horizons. From a much needed awareness-raising function in the early days, we have moved on to other roles such as specialised analysis, strategic support and capacity building. From a highly Europe-oriented focus and platform, we have been able to become more active in different regions of the South through the decentralisation and regionalisation of our still small organisation.

Through these processes, GRAIN is trying to better account for local realities, and thereby improve our ability to support national and local organisations in a relevant way. But it also inevitably changes the way we look at the international debates, which until the 1990s were quite devoid of grassroots perspectives. While GRAIN has always had a foothold in international policy debates over genetic resources and will continue to play a role there, we are quite aware of the feeling a lot of people have about these processes getting us nowhere. Laws relating to intellectual property rights (IPRs) and corporate technologies keep spreading, while the space for farmers' and community rights keeps getting further trampled underfoot. Unless we keep fighting at all levels – local, national, international – the damaging trends will continue. Precisely by linking those different levels, and showing that real alternatives do exist to the current push from industry for uniformity, we will be able to promote biodiversity-based agriculture.

Anniversary reflections

We hope that the new *Seedling* reflects some of the changes we have been going through at GRAIN. This anniversary issue carries an article on the international workshop that marked the end of the Growing Diversity project. This was the culmination of a two and a half year effort to

support and document an impressive variety of experiences from farmers, hunters and fishermen who are rescuing, nurturing and working with biodiversity at the local level. It is a celebration of diversity and an example of how many groups are moving beyond pointing to the problem and are working hard locally to develop real alternatives. The Growing Diversity experience demonstrates that by linking, exchanging, and learning from such experience we are beginning to form a formidable force that can no longer be ignored at any level.

But an anniversary is also a moment of critical assessment. We are very happy to have contributions in this special issue from two very special people. Erna Bennett and Camila Montecinos who were both working on the "*seeds issue*" long before GRAIN even existed. Back in the 1970s, Erna – working then at the FAO in Rome – forced people to understand that governments need to take action to combat the erosion of genetic resources and stop the increasing control over them in the hands of corporations. In the 1980s, Camila – working with farmers in Chile – showed to many of us how farmer-created biodiversity is not only more sustainable, but also a more productive way of producing food for all. Both of them, writing here in their personal capacities, contribute critical and provocative reflections about our intentions and efforts over the past decades. We hope that these articles will contribute to a broad and stimulating discussion of where we stand with the genetic resources movement and where we should be heading. Because this is what *Seedling* is all about. ♦



The 'rights' issue around biodiversity has really taken off in the last 20 years. One of the first campaigners for a global programme to save crop genetic resources, **Erna Bennett**, looks back at the twists and turns the rights issue has taken since the introduction of Plant Breeders Rights in 1962. She argues that a change in strategy and direction is long overdue for all those fighting for more equitable access and rights in relation to agricultural biodiversity.

The Summit-to-Summit Merry-go-Round

ERNA BENNETT

Five years ago, in the December 1996 issue of *Seedling*, Camila Montecinos are asked some pertinent and hard-hitting questions about the popular and much discussed *sui generis* principle which was proposed as an alternative to patenting animals and plants. In her article¹ she marshalled some hard facts and arguments to expose the doubtful nature and fragility of the concepts on which it was based, and suggested that the *sui generis* option was perhaps a dead-end alley. The article should have stimulated a major debate. It explicitly invited a debate. But there was none. Why?

The publication of this quietly reasoned and soberly assessed case was followed by a deafening silence. It was the kind of silence that might follow the use of an irreverent expletive in church. Everybody hears it, but good manners demand that we all pretend that we did not. Could this be a possible explanation of the silence that followed? Or did we hope that the many spectres revived by the article might go away by themselves if left well alone?

I am one of the many guilty of silence in a situation that called instead for a chorus of voices. I carried that issue of *Seedling* several times around the

world with the intention of replying, but never did. How many others, I wonder, must have done the same thing? History, however, is not born of good intentions, but of actions arising from debate. No debate, no action, no solution.

But we can no longer ignore the long, depressing backlog of doubts that has accumulated around the *sui generis* story. These range from doubts about the ability of a *sui generis* system to counterbalance the increasing corporate control of genetic diversity to other more fundamental doubts about the whole notion of property rights over a common resource of human society. Could *sui generis* really offer any protection to the descendants and inheritors of the anonymous generations whose labour through the centuries created genetic variation in the first place?

A history of appropriation

The urgency and gravity of the *sui generis* issue is beyond doubt. It was so five years ago, and it is even more so now. Like every issue relating to the common resources of human society, the *sui generis* debate has to do with the exploitation and expropriation of a majority, mostly poor and powerless, by a few who are rich and powerful. Genetic resources are no exception to this rule. The



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¹Camila Montecinos (1996), "Sui generis- a Dead End Alley?," *Seedling* December 1996.

UPOV: Protecting Industry, not Agriculture

The Union for the Protection of New Varieties of Plants (UPOV, from its French derivation) is a multilateral agreement that has been adopted by countries offering common rules for the protection of the ownership of new varieties by plant breeders at the national level. Set up in 1961, UPOV went from six original European members to around 20 by the early 1990s. As of May 1, 2002, there are 50 members.

Through successive revisions to the original UPOV Convention (in 1972, 1978 and 1991), the protection offered to plant breeders has become more and more similar to patents. In fact, the 1991 revision was meant to put the UPOV system on nearly equal footing with the patent system.

Rights granted to breeders under UPOV are powerful. The Plant Variety Protection (PVP) afforded under UPOV gives the breeder full commercial control over the reproductive material of his or her variety. This means that farmers growing PVP varieties are prohibited from selling the seeds they harvest from the crop. In addition, they are increasingly being prevented from saving and exchanging seeds on a non-commercial basis. PVP also means that farmers pay royalties on every purchase of seeds. Furthermore, only licensed growers can multiply the variety for sale. Under the terms of the 1978 Act, UPOV makes two exceptions to the commercial monopoly. Farmers are allowed to save seed for their own use and breeders are allowed to freely use PVP varieties to develop newer ones. But these exemptions are restricted in the 1991 Act, which is now the only Act open for accession to countries looking to join UPOV.

long battle to protect and conserve genetic diversity has revealed the full fury of very powerful vested interests prepared to stop at nothing to establish and maintain total control over such resources, by plunder when necessary and increasingly by legal and diplomatic trickery.

Corporate manoeuvres to take over the genetic resources of agricultural crops entered their present phase with the Plant Breeders' Rights legislation of 1962. This legislation conferred marketing rights not on plant breeders as its authors falsely suggest, but on the companies employing plant breeders. This move marked the onset of a massive privatisation which saw plant breeding transformed, in the course of a single decade, from a largely public service to a heavily privatised industry increasingly tied to giant agro-chemical corporations.

This transformation coincided with the Green Revolution and the dependence it created amongst farmers on the use of high-response varieties (more commonly and misleadingly called 'high-yielding' varieties). These varieties did increase yields of certain major crops in the most fertile agricultural zones, but in most areas they did not. They also greatly increased fertiliser and pesticide inputs. At the same time, the intense commercialisation of agriculture and the competition this stimulated led to a growing demand for new sources of genetic diversity, leading in turn to a greatly increased exploitative interest in genetic resources. These developments had a profoundly negative influence on plant breeding itself and on the environment.

The transition from Plant Breeders' Rights in the 1960s to the patenting of life forms was a short but logical, and wholly anticipated, step. Since the 1970s, the corporate take-over of a field long associated with the public sector and relatively small local enterprises has proceeded at breakneck pace. In the late 1970s and 1980s, pressure began to grow around patenting and intellectual property rights (IPRs), and the battle, already world-wide, became intense. This period saw the growth of NGO involvement, and later added impetus from civil society organisations (CSOs).

Nationally and internationally, IPRs became a guiding dogma in an increasingly privatised world.

"IPRs became a guiding dogma in an increasingly privatised world. The cash nexus came to govern every relationship, and the idea of 'public service' atrophied visibly."

The cash nexus came to govern every relationship, and the idea of "public service" atrophied visibly. Plant Breeders' Rights, which have little to do with plant breeders and even less to do with rights, are really concerned with the conferment of market privileges for the employers of

plant breeders. Patents formalise and legalise private claims to the results of innovative genetic activities of which a significant part are social in origin. Patents have come to be used as a legitimising cover for intellectual and genetic plunder. In the course of a single decade, IPRs came to dominate the policies and mind-set within the UN and its agencies. They also came to weigh heavily on the tactics and strategy of NGOs and CSOs.

Society's values shifted rapidly from norms of public service and the common good to others justifying the concept of individual property rights, which



were absorbed almost painlessly by perpetrators and victims alike. Property became god. Those who owned the ball made the rules and shifted the goal posts for the new game. Players who were not ball-owners had no choice, or felt they had no choice, but to accept the new rules.

Negotiating with the robber

In this age when the word, if not the practice, of “rights” was accorded such a well-cultivated lustre that it was the very worst of bad taste to question the notion of IPRs, it seemed to some that the only way forward for the defence of popular rights lay in playing the game by the system’s new rules. So the idea of “Farmers’ Rights” was invented. It was felt that this would create a place within the new system of property-based legislation for recognising and rewarding farmer innovation.

Since the principles of property-based relationships were recognised by some NGOs, and the concept of Farmers’ Rights offered no fundamental challenge to the system, the debate on genetic diversity

became institutionalised. The battle front shifted to the conference and committee rooms of the powerful. At the same time the poor and vulnerable were given the impression that their cause was a subject of “participation” and “negotiation.” In reality, though this became evident only with the passage of years, their struggle had entered a minefield scattered with diplomatic duplicity and endless legal wrangling.

But Farmers’ Rights was a fundamentally flawed argument that had been proposed by some who feared that to confront the robber who was already in the house might be to court conflict and disaster. A more discrete course, they thought, might be to “negotiate” terms which would permit him to proceed with his plunder but, at the same time, work out some sort of a “just” settlement that might placate his victims. In short, those defending plunder’s victims armed themselves with the weapons of the enemy – the recognition of property rights, however legitimately or illegitimately that property had been acquired.

TRIPS: Breathing new life into UPOV

The World Trade Organisation’s (WTO) agreement on Trade-Related Intellectual Property Rights (TRIPS) obliges all members to provide intellectual property protection for plant varieties at the national level, either through patents or “an effective *sui generis* system” or both (Art. 27.3b). Few countries have laws that explicitly provide for patents on plant varieties, while others permit it in practice. As patents block anyone but the patent-holder from not only making and selling but using an invention, the patenting of plant varieties would severely affect plant breeding and agriculture at large.

TRIPS does not define what an “effective *sui generis* system” for the protection of plant varieties might be. Industrialised countries had the UPOV system in mind when TRIPS was drafted, but UPOV is not mentioned in the Agreement. This means that the jury is out on what is to be considered an “effective” system under TRIPS. The UPOV Convention is an international agreement which sets rules for patent-like monopoly rights over crop varieties (see box opposite). It is highly biased toward industrial farming conditions and the bulk of UPOV’s members are rich countries of the North.

The 69 developing country members of the WTO were supposed to have implemented Art. 27.3(b) of TRIPS by January 2000. The 30 least-developed country members have until January 2006. And while a mandated review of the provisions of TRIPS Art. 27.3(b) has been under way since 1999, it has not yet resulted in any concrete actions to change the Agreement, despite very clear proposals from the South on how to improve it.

Despite the flexibility the *sui generis* option in TRIPS seems to offer, UPOV-type PVP is increasingly being pushed as the only *sui generis* option in the South.

Just a quarter of the WTO members from the South have PVP legislation in place. Of these 26 - the vast majority of which only did so in the last few years, because of TRIPS - have also joined UPOV. An additional 25 are currently in the process of joining. And yet another 39 are allegedly seeking UPOV’s advice on the conformity of their draft PVP bills with the UPOV provisions.

What does all this mean? Country after country, the *sui generis* option in TRIPS is gradually being reduced to UPOV-type legislation. The main reason for this is direct pressure from industrialised countries to harmonise intellectual property laws worldwide - not only through global treaties, but also through regional and bilateral trade and investment agreements. This carries serious implications for sustainable agriculture and farmers’ rights, because accepting UPOV is the first step toward accepting full-fledged patents on life.

To see a detailed table outlining where all the countries in the South are with respect to UPOV, visit: www.grain.org/publications/pvp-south-upov-en.cfm





The author talking to farmers in the mountains of Greece while collecting wheat landraces during her time at FAO

A lifetime of conservation

Erna Bennett was one of the early pioneers of genetic conservation. After active service in the Second World War in the Middle East and Greece, she returned to her studies. In her early postgraduate years she taught in England, and was engaged in cytogenetic research there and in Ireland for a number of years.

Working at the Scottish Plant Breeding Station with J.W. Gregor in the mid-1960s, she returned to her early interest in micro-evolution and the origins of genetic diversity, and began what was then to become a long series of expeditions collecting genetic diversity of mainly forage and cereal crops. At this time she wrote her 1964 paper warning of the need to conserve and protect genetic resources, *"Plant Introduction and Genetic Conservation: Genecological aspects of an urgent world problem,"* which was widely read and translated into a number of languages.

Erna joined the UN's Food and Agriculture Organisation (FAO) in 1967, where she succeeded in mobilising the FAO to become involved directly in collecting the genetic resources of crop plants in many countries, while there was still time. She was responsible for coordinating national and international exploration and genetic conservation programmes in the countries of the Mediterranean Basin and southwest and central Asia as far as Afghanistan, and travelled very widely in the course of her work. She also initiated the first world survey of crop germplasm collections, which yielded invaluable information that has been drawn on widely over the years. At this time she co-authored and edited the first classic book on genetic resources with another early campaigner, Sir Otto Frankel. Published in 1970, *"Genetic Resources in Plants"* helped to convince the 1972 Stockholm Conference on the Human Environment (a predecessor of the 1992 Earth Summit) to call for the first global programme on the conservation of crop genetic resources.

While at FAO, Erna became increasingly concerned that the immense efforts to collect and conserve the world's precious and irreplaceable germplasm in which she was involved stood in grave danger of being hijacked by powerful private interests. She observed the initial moves towards first, covert, then overt and massive privatisation of genetic resources and the increasingly dominant role of corporations determined to usurp control of immensely valuable agricultural germplasm. Having battled within the FAO for many years to keep corporations out of the UN system, she was eventually forced, as corporate influence over FAO policy reached intolerable levels, to resign from the UN in 1982. Since then, She has stayed active on these and other issues – lecturing, writing and advising – but outside official circles.

Erna Bennett was not alone in the first turbulent years of campaigning for programmes on genetic erosion. She remembers with great warmth and affection many of her early fellow pioneers. But as Pat Mooney wrote in his book *Shattering*¹, *"it was this colourful, outspoken Ulster-born Irish revolutionary who first coined the phrase 'genetic conservation' and brought substance and strategy to the term for the world community."*

¹*Shattering - Food, Politics, and the Loss of Genetic Diversity*, by Cary Fowler and Pat Mooney, University of Arizona



The flaw, however, remained. It became the core of what Camila called “a conceptual chaos” caused by the attempt “to develop the indigenous community equivalent of the basic concepts of the present industrial and post-industrial property system.” Hence a tangle of arguments proliferated around the concepts of “collective intellectual property” and the “just and equitable distribution” of its benefits. The tangle emerged because most of those whose forebears created the genetic wealth that is so greatly desired by the wealthy and their powerful corporations find the concept of property a quite foreign one. Their view is that we are the custodians of nature and its wealth, but it is not our property.

This view is not confined to non-western social systems. Attempts to dismantle it and replace it with a culture based on private property date back centuries. An early example of privatisation by trickery occurred in Ireland at the time of the Tudor invasions. The English sought (successfully) to overcome Irish resistance by trickery, applying a policy of “Surrender and Re-grant.” Some of the Irish chiefs who under Irish (Brehon) law governed clann lands as elected leaders on behalf of the clann, were persuaded to surrender the land to the English crown, which then re-granted it to the chiefs who thus became owners under English (feudal) law and - here’s the trick - in the process became subjugated to the English king.

The principles of public service and the public good survived until recently. In her article, Camila noted that “the foundations of our present scientific development were created under an explicit assumption that knowledge is a common good that is created for the common good.” But she observed that the “exchange [of knowledge] between scientists, which is a basic tool for accelerating the creation of knowledge, is being systematically dismantled,” and with it public science that is “characterised by free access, free creation and working for the common good.” Opposing these trends the logical next step is to reject intellectual property altogether, Camila says. Why has this not happened? “Why,” she continues, “do we continue to negotiate, attempting damage control through accommodation, accepting being governed by rules that we know to be extremely damaging? Have we lost hope? Are we afraid? Do we feel cornered?”

Here is the crux of the whole story. We are witness to the collapse of an entire system of values and its replacement, under the pressure of a now globalised privatisation, by another based exclusively on the cash relationship. It is a system already torn by

internal weaknesses and contradictions, but within which we are indeed cornered.

Abandoning Farmers’ Rights

I was invited to be present at the April 2001 meeting in Spoleto, Italy [which met] to put the final touches to the International Undertaking on Plant Genetic Resources. It turned out to be a disturbing experience. The first inter-governmental meeting I had attended in at least a decade and a half, this was a blood-chilling *déjà vu*, marked by the same legal play with words concealing savage obstructionism, and the same arrogant determination to satisfy the same private corporate interests that had crept through the gaping cracks of our defective defence of the public interest in the 1970s. The meeting produced a toothless, truncated document, scattered with beautiful words. This was the best that Spoleto could do.

Even more chilling, however, was the apparent belief of some observers at the meeting that they were at last moving towards victory in what had been a long and difficult war of nerves and wits. But what about access? What about Farmers’ Rights,

“We are witness to the collapse of an entire system of values and its replacement, under the pressure of a now globalised privatisation, by another based exclusively on the cash relationship.”

which had in any case become, as Camila observed, “closer and closer to the concept of intellectual property, to the point that official documents now typically put them side by side.” Access is still subject, apart from a limited number of crops, to conditions that favour the powerful. And Farmers’

Rights have been deliberately abandoned to the ambiguities of national interpretations.

What’s new about all this? Nothing. The International Treaty on Plant Genetic Resources which was finally agreed several months later concedes nothing but a few fragments of bracketed text and some “room for re-opening discussion” on the “key issue” of Farmers’ Rights – a decision that was applauded. Re-opening discussion? The wealthy and the powerful concede the possibility of talking about all these problems again. But decades of discussion have yielded nothing that is not surrounded by an infinite tangle of “ifs,” “buts,” and “provided that” that presents a permanent barrier to change, and provides a citadel for the vested interests resisting change. This is the goal of these unending games with words, and this objective has been achieved.

The Treaty was described as “weak,” but it is not at all weak. From its beginnings this agreement set out to promote the interests of the powerful, and it has done so very effectively.



Now that the new ground rules had been established the Treaty could happily be signed without any great danger of the hostile resistance from below that would otherwise have remained on the agenda. This treaty, the fruit of seven years of negotiation and warmly acclaimed by mainstream media, has been judged by CSOs to be neither fair, nor equitable, nor comprehensive. Could we have expected otherwise?

Camila summarises the situation. *"The balance sheet,"* she says, *"shows an increase in laws and regulations that manage, facilitate, and organise expropriation of resources relative to those protecting them."* She adds, *"Regrettably, the gradual deviation of discussions towards alternatives or exceptions inside the existing system has lost us precious time"* [emphasis added]. But what can now be done?

Beyond declarations of intent

In such a context, a major task is to define what alternative system can take the place of the existing system. Do we mean a new system of control and

"We have embarked on a meeting-to-meeting, summit-to-summit merry-go-round, convinced that the next international gathering will surely stage the battle that should not be missed."

regulation within the present social system? Or do we mean a new social system? How do we propose to define such a system? Or achieve it? Using what criteria? By what means? What models are we in a position to, or prepared to propose?

As far as genetic resources are concerned, declarations of principle and intent have not been wanting over the past four decades. There has been no shortage of beautiful words, persuasive arguments or declared concerns. However, among the decision-makers with the power there is, and always has been, a wide divergence between declarations and deeds, and these are the forces which govern the existing social system. Introducing its recommendations, the 1967 Conference on Genetic Resources in Rome said, *"it is deemed a national and international obligation to discover, conserve and make available the world's plant genetic resources to all who at local, national or international level may profit man by their access to them."* Yet almost forty years later access to genetic resources is more restricted than it ever was.

Why? Because, in the words of the Bogève Declaration of 1987 on Biotechnology in the People's Interest, the use of such resources *"is inevitably linked to the society in which technology has been created and is used, and consequently it tends to reflect the social characteristics, whether just or unjust, of that society."* In other words, however enlightened legislation may be, its effectiveness depends on its social context and on how many of its provisions

survive the persistent and savage amputations carried out by state administrations that serve the interests of a privileged minority.

We need cast no more than a passing glance at any international meeting or summit of recent decades for the confirmation of this. Five years ago the World Food Summit gathered together 9,800 delegates representing governments of 186 countries, including the heads of state and prime ministers of 80. It cost a budgeted US\$1.2 million, plus *"voluntary contributions"* of mostly private sector sponsors to the tune of an estimated US\$7 million. They met in Rome to *"discuss"* the problem of world hunger and food security. Delegates of 1,500 NGOs also *"participated."* Participated? They were provided a four minute time slot to make a statement – one seventh of a second each – to an almost empty session.

A final declaration, listing *"Seven Commitments,"* from which the right to food was noticeably absent, was *"the lowest common denominator"* of international consensus. In spite of impassioned appeals from NGOs for support for a *"Commitment Eight"* to establish a universal *"Right to Food"* – a proposal supported by Pope John Paul II and many Summit speakers – the best to emerge from this circus was a non-binding pledge to cut the numbers of the world's hungry from 840 million to 400 million in twenty years. Cuban president Fidel Castro described this as *"shameful."* At the five-year follow-up to the summit in Rome in June this year, this time unattended by the leaders of almost all the rich countries, delegates admitted that even this target would not be met (see p 24).

NGO and CSO involvement in such institutional events has clearly achieved very little, and has had negative effects. *"We have embarked,"* Camila concludes, *"on a meeting-to-meeting, summit-to-summit merry-go-round, convinced that the next international gathering will surely stage the battle that should not be missed,"* and we *"have turned good intentions into wishful thinking."* Perhaps we should be careful to refer instead to *"declarations"* of good intentions.

The world remembers the G8 Summit at Genoa in 2001 for a variety of reasons. Leaders of some of the richest countries in the world hoped to appeal to public concern and to neutralise popular resistance to their activities with a hypocritical display of 'generosity.' To this end, they promised a sum of US\$1.3 billion for a world campaign against the Aids epidemic. They were well aware as they did so that the minimum UN estimate for such a campaign was at least \$10 billion. Whether national



or international, all the institutions of the present system thrive on deceit.

Reclaiming our reference points

All this does not mean that nothing can be done, or that it is not more important than ever to pursue every valid initiative with intensified vigour. On the one hand, time is not on our side. On the other hand, public concern is widely assuming new forms and seeking new and untried roads that do not bind us to those institutional structures that have so consistently failed us in the past.

Another world is gathering remarkable force, and calls for our critical appraisal and constructive involvement. Reverses of the past need not nourish pessimism, but serve to re-affirm all the more decisively the road to take. The growing mood that insists on change *"from the base up"* marks a new stage in the development of concern for the fate of our world and its people and resources. It provides an opportunity, to use Camila's words, to *"reclaim our own reference points."* It is high time for the unprivileged majority to set the rules of the game. But can they? And what are the rules of the game? What are our reference points for the future? What principles, precisely, are we seeking to defend, and how are they to be established and secured?

Our major reference points have already been established and amply expressed. Many civil society organisations in the intense global ferment of recent years have made biodiversity and food security explicit and central components of their own policies. Informed popular resistance to the theft of biodiversity legitimised by the patenting of life forms has now become part of a tidal wave of public opposition that is affecting, and will increasingly affect all of civil society.

This opposition can not any longer be side-stepped as it was at Spoleto in April 2001, when Via Campesina presented a position paper, and more than 250 CSOs presented a strongly worded, open letter to delegates at the meeting. Although Via Campesina represents peasant organisations and farmers' groups all over the world, their intervention was not enough to divert the meeting's dominant members from their principal purpose, expressed over half-a-century of such gatherings, of asserting and consolidating the power of the corporations and the governments that serve them.

The experience of Spoleto, and more recently the Treaty, confirm for the umpteenth time that playing the game by the enemy's rules has achieved nothing but to show us how we got to where we are. But it has not shown us how to get out.

What is needed is a qualitative change in the relationship of the forces involved in the struggle. Such a change is already apparent in today's developing contest between the world's privileged and powerful and its still unempowered but numerous majority. In this last, however, an important voice is still under-represented – that of the scientists, technicians, and geneticists whose skills directly serve the corporations. But here also, among these intellectuals till now considered a *"neutral"* social force, deep concern at the social consequences of the misapplication of their work is growing. Their concern has turned to doubt, and their doubt to anger.

Many of them believe that the technological changes of which they are the agent are a social benefit, or at worst a necessary ill. Traditionally, these intellectuals have chosen to stand aside from serious discussion of the social consequences of their activities. In the growing ferment of our times, they are slowly realising that their own lives are as deeply affected by corporate control of their work as the lives of the poorest and most vulnerable of people. There are unmistakable signs of an increasingly radical stance on social responsibility. Many professional and scientific associations have called for the revival and extension of the ancient Hippocratic Oath that set ethical norms for medical practice that are still widely observed. They have taken committed stands on social and political issues to the point of refusing to work for morally and ethically indefensible interests.

Last year the British *Lancet* and the *US Annals of Internal Medicine* published an appeal by some medical researchers *"to recognise the need to re-affirm in the context of modern society some of the principles set out for the first time by Hippocrates."* It was accompanied by an energetic attack on the corruption which is *"widespread in the fields of medicine in which private interests are most involved,"* and sets down a list of fundamental principles and commitments that call for serious consideration.

Is it not time, perhaps, that geneticists and others working in the fields of biodiversity, biotechnology, plant breeding and genetics state clearly their opposition and their resistance to the social and ethical misapplication of their work?

Recently a small group of geneticists, including two Nobel Prize winners, wrote to the *US review Science*, which was proposing to publish an article

"Informed popular resistance to the theft of biodiversity, legitimised by the patenting of life forms, has now become part of a tidal wave of public opposition that is affecting, and will increasingly affect all of civil society."



on the sequencing of the rice genome, knowing that the corporate-based researchers had no intention of publishing the gene sequences. One signatory of the letter declared that such an action by *Science* ran contrary to the central principle that progress in science is based on the free exchange of ideas, procedures and results, and to publish the article would imply the review's approval of the privatisation of knowledge. The incident recalls the similar polemics that surrounded the ambitious – and publicly funded – Human Genome Project. Near its completion, it was privatised in a blatant act of theft and many thousands of human genes and gene sequences were then claimed as intellectual property and patented.

There certainly are signs of a growing awareness of social responsibility. Has it been born, perhaps, from the same renaissance that has given life to the World Social Forum movement? Might we merely be observing the delayed effects of long NGO campaigns? We may like to think so, but NGOs and CSOs can not automatically be regarded as a sort of moral and political reference point. These groups do not offer a magic formula, simply by virtue of their status. Some are radical, some are conservative. Their range of approaches is as wide as that of the world beyond them – from those that are institutionalised by collaborating within the existing system to those that completely reject it. Cold comfort, therefore, to any who hope for ready-made answers to the problems that torment our generation. Is it not more likely that all this ferment – that the existing system pretends for the moment not to see – is a sign of a rising tide of popular protest at the arrogance and cynicism of power, wherever and however it is exercised?

There is clearly a conflict of interest between public service and private appropriation. It can not be resolved by distant and elitist debates, no matter how hard they are fought. Nor can it be resolved by the increasingly popular so-called non-consensual debates in which participants agree to disagree. But it can be resolved within the context of a worldwide protest that is now assuming a perceptible form and structure, and a reality and immediacy. It is a first step only, but in the right direction. It signals a revolt within the system, and it can draw increasing strength from the popular movement that is assuming a significant dimension everywhere, which in turn can only strengthen our own battle to defend the common genetic wealth of the whole of society.

The day is coming when scientists and intellectuals will accept the need to take social action and accept social responsibility as an integral, and not a

supplementary part of their scientific responsibility, adding their voice and their actions to those of millions of others. That will be a day of great hope for a direly threatened world. ♦



Beyond Summits?

The World Social Forum is a new international movement for the creation and exchange of social and economic projects that promote human rights, social justice and sustainable development. It takes place every year in the city of Porto Alegre, Brazil, to coincide with the corporate-financed World Economic Forum which meets in Davos, Switzerland at the end of January. Since 1971, the World Economic Forum has played a key role in formulating the economic policies of the world's richest states and those dependent on them.

In this article, **Camila Montecinos** attempts to answer some of the challenges she put forward five years ago. If *sui generis* is a dead-end alley and the tried and tested strategies of summitry and 'participation' have failed, where should we go now? Here, she outlines the need to reclaim our reference points and find a more rewarding and more resonant place for ourselves in the world from which to act.

The Ecology of ACTION

CAMILA MONTECINOS

On September 11, 1973, Chileans awoke in the midst of a *coup d'état*. This signalled the beginning of an era marked by death, from which we have yet to recover. A long tradition of striving for social rights and justice, the product of continuous social struggles, was killed systematically and without mercy. Much of our artistic and intellectual capacity died in the process. Chile's great poet Pablo Neruda died of cancer accelerated by sadness. More than 3,000 fellow citizens also died, assassinated by torture, executions and fake confrontations with the military.

Since that September 11, Chile has been considered a pioneer in the merciless application of the wild capitalism that is progressively surrounding us. And it has possibly been one of the leaders in the inauguration of a new era characterised by death - physical and symbolic - which has plagued our planet ever since.

Beginning in the 1970s, political, military, academic and intellectual authorities began to inform us of a variety of sudden deaths. First we were told that class struggle had died. Then we learned of the death of ideologies. Soon after, labor unions, revolutions and

the welfare state passed away. Next, it was History's turn to disappear, followed by utopia. According to some, local and national economies have already died. And it seems as though we now await the last breath of nation states.

Something mysteriously contagious must have caused these deaths because simultaneously a series of previously universally accepted social values disappeared. Social and economic rights (health, education, food, job security), solidarity ethics, public spaces, and social control of usury all died. That these values were not strong to begin with might explain why they were so vulnerable to this epidemic. But soon some much more important values began to die, such as the sanctity of life, the free circulation of knowledge, and the right to dissent.

Agriculture, biodiversity, and the rural world have not been exempted from this epidemic. In these cases the loss has been painfully material. Thousands of small farmers and their families disappear each year, along with their diverse production systems, crop varieties, animal breeds, and locally important plant species. At the same time, incalculable biological resources are being destroyed. The spiritual and



inmaterial world has not had better luck: local and traditional knowledge systems are caught in the crossfire of privatisation and the obsession for modernisation; indigenous territorial rights are prisoners to national sovereignty and hostages to various forms of prospecting initiatives; and many cultures and religions struggle with all their might to escape museum embalming parlours.

It is in this death-ridden context that we are expected to live and act. The past 30 years have been characterised by a series of profound changes, accelerating in the last decade. So much so that social struggles have increasingly focused on working and fighting *against* while the necessary component of working and fighting *for* has progressively vanished over time. It seems that we no longer centre our efforts on building a future, but rather, focus on resistance in order to avoid a worse fate. What is sad and paradoxical about this is that dissent against the empty promises of global capitalism is growing. Why is it then that most initiatives to either resist or construct alternatives seem to have come to no good?

Finding our place in the ecosystem

Edgardo Morin proposes the concept of *"ecology of action"*.¹ He asserts that *"Here is where the notion of the ecology of action intervenes. The moment an individual undertakes an action, whatever it may be, it starts to escape her/his intentions. The action enters a universe of interaction and it is finally the environment that takes possession over it, possibly changing its course into one contrary to the original intention."*

Morin's metaphor is extremely powerful. Into what systems are our actions *"escaping us"*? The answer to this question is a strong call to observe caution when assessing the effects of what we do. After twenty years of rampant privatisation, the loss of our rights, and our failure to infuse some sort of ethics and social responsibility into what is called society's 'development,' it is dangerously arrogant not to take a critical look at the results of what we are doing.

We are part of a broader ecosystem in which we are expected to behave as a monoculture: an endless landscape of homogenous, disciplined, predictable and easily exploitable individuals. We are part of an environment in which the basic dynamics imposed on us are expropriation, privatisation, and concentration of resources and sources of wealth and welfare. In this environment where everything is being privatised, the only things being socialised

– shared publicly – are social and environmental costs, and the *status quo* will be maintained at any cost. It should not be surprising then, that a large part of our efforts in recent decades have been absorbed, digested, co-opted, recycled, and spat back into the environment in a functional role, serving to feed systemic tendencies, especially those that lead to theft and privatisation. A most recent example is that of the Farmers' Rights article found in the Food and Agriculture Organisation's (FAO's) Treaty on Plant Genetic Resources. All threatening content was neutralised. Farmers were reduced to

mere seed producers and the possibility was left open that farmers could be forced to pay a fee, or a royalty, should they decide to impose conditions on access to the seeds they produce. Article 8j of the Biodiversity Convention contains plenty of

similar distortions. While the concepts expressed in this agreement serve as the basis for many important arguments opposing bioprospecting initiatives, their interpretation has also served to legitimise bioprospecting, facilitate the hijacking of local resources, and create profound tensions and divisions within small farming communities and among indigenous peoples.

These are only two cases in a sea of examples. It is precisely because of this sea of reversals of our goals that we can no longer take refuge in our intentions. Whether we want to or not, we need to take a critical look at our achievements, and look for processes that permit real impact once our actions *"escape"* into an environment which devours them.

Redirecting our energy

Morin's metaphor seems to hold four implicit inferences that can assist us in this endeavour. The first is that we can no longer inject our actions into processes that the system itself has identified as necessary for its operation. It is time, for example, that we recognise summit meetings for what they are: mechanisms that undermine all formal channels of citizens' political representation and governance, centralise decisions in the hands of delegates who do not respond to any form of social control (but rather, respond exclusively to their respective executive powers), and use the presence of a few members of civil society to legitimise a fundamentally non-democratic process. Moreover, an important part of the official channels of participation allocated to civil society members have served to identify, distract, neutralise, and/or counteract sources of dissent. In other words, it is time that *"participation"* be stripped of its guise of neutrality, as *"technology"* was long ago. It must be



¹Edgardo Morin, Pensamiento Complejo, www.inader.es/-lmisa/complejo6.html.

understood for what it is: a political process that responds to the political realities and objectives of those who design and impel it.

The recent Social Summit meetings in Porto Alegre were an attempt to fight against this trend. There, we observed different expressions of social movements as they defined objectives, topics of discussion and action plans. They became a fresh wind, creative and encouraging in a social landscape that had appeared to lack alternatives. Yet, the Porto Alegre Summit offers more invitations than answers. Whether we like it or not, it is still a summit, and it can only carry out its catalyst role if what is discussed, built, or shared there reflects processes initiated at the grass-roots or local levels. A social summit can not be the motor for change, only a reflection of decentralised and insubordinate multiple social actions. The most stimulating aspect about the Porto Alegre Summit was that it clearly signaled a search for new channels and alternatives. What made our hopes strong is that this search involves multiple paths and actors. The most urgent task is that it is reinforced locally and regionally.

A new process, a new physiology

Morin's second inference is that we need to focus on those processes that can effectively alter the physiology of the system. Objectives like decentralisation, social control of social and economic processes, and the expansion of public and collective spaces are pivotal elements to the course we are pursuing. These are, unquestionably, daunting challenges. For example, the concentration of power that we are witnessing today is not only a concentration of wealth and commercial flows, but of practically all forms of power. These actors strongly influence decision-making processes, resource management, the creation and socialisation of knowledge, as well as many other processes that determine production systems, lifestyles and cultural expressions. We are talking of multiculturalism, (not just interculturalism), a need that goes far beyond the "*participatory*" processes in education or research we can currently witness. We are talking about promoting totally different and diverse forms of building knowledge, along with multiple, locally-based technological, productive and normative processes.

Efforts to achieve these goals are under way. Today, hundreds of rural and indigenous communities are working systematically towards reviving their own processes of knowledge creation, land management, and biodiversity development and conservation. Fast and extensive advances have been made (or at least made visible) through new forms of collective experiences in the areas of local control

over production systems, seed maintenance, and exchange systems. What was considered "*absurd*" or "*demagogical*"¹ ten years ago, has now shown to be possible many times over.

The multiplication of similar processes and the creation, or recuperation, of political, social and cultural frameworks which can reinforce these and other processes of autonomy and social control is part of what is left to do. Because we are part of a society where rights continue to be reduced and restricted to the right to expropriate, appropriate, and exploit, the recuperation, construction or reconstruction of a different concept of rights is probably one of the most pressing tasks. We can not go on arguing whether the answer is benefit sharing, *sui generis* rights, or the defensive interruptions of all resource and knowledge flows, as doing so only reinforces our contribution to privatisation and concentration frameworks. The history of humankind has shown

that all processes of harmonious social coexistence are built upon the notion of reciprocity; upon collective rights and norms that do not constitute property rights. In this context, rights to utilise and enjoy are linked to clearly-defined responsibilities and duties. Better yet, in spite

of the devastating legal frameworks imposed today by the World Trade Organisation, the Free Trade Agreements and other international agreements, a vast majority of humankind still continues to believe that collective rights are fundamental. This perception should be the basis for questioning current laws, regulations and legal frameworks, and for responding to the biased, unilateral and mutilating vision of neoliberalism.

The creation of different systemic physiologies demands that we understand the operation of social systems as a coherent whole. We are reminded once again that the problems facing biodiversity are the same as those faced by small-scale farmers, local economies, rural and indigenous cultures, human and social rights, the effective participation of civil society, peoples' rights to self-determination and ... the list goes on and on. Thus, challenging these problems, demands that our actions be interconnected and our analysis comprehensive.

Broaden and deepen involvement

None of the above will be effective unless efforts made are rooted in daily life, are consistent, and increasingly involve wider sectors of society. This is Morin's third corollary. Even the most disturbing action will not have an impact on the system if it

"The history of humankind has shown that all processes of harmonious social coexistence are built upon the notion of reciprocity; upon collective rights and norms that do not constitute property rights."



¹A demagogue is a leader or orator who appeals to popular desires or prejudices to further personal interests

takes place as an isolated event. This is an old lesson that led to the establishment of many formal and informal NGO networks. Now we need to progress from NGO networks to larger and more diverse social movement networks. Progress in this area was observed at the Porto Alegre Summit, Brazil's rejection of genetically modified crops, the *Via Campesina* campaigns, and in the struggles of indigenous movements. But we still have a long way to go, and the learning process ahead of us is difficult. How can we encourage and participate in social movements that are rooted locally and in daily acts? What role should we, NGOs, play while we are still learning that NGOs are not a social movement, but merely one of many actors?

Imagination and utopia

Morin's fourth corollary is the need to create *autopoiesis*, the capacity of systems to generate and regenerate themselves. A system will continue to change when it is able to generate changes that reinforce the change. This implies that if we do not change the mental landscape, we will fail at changing the social and physical landscape of which we form a part. This, again, is an old lesson. We have participated in many successful educational, capacity building and conscience raising efforts. Today we must contribute to the insubordination and diversification of our imaginations. We must aim for the creation of mental landscapes that permit us to repopulate the world with that which has been considered dead by decree along with the new that will necessarily emerge. Is it really true that utopias are dead? Well then, let's build new ones.

"Is it really true that utopias are dead? Well then, let's build new ones."

But perhaps the most liberating aspect of Morin's vision is that he reminds us that in an ecosystem, species do not live or die either by authoritarian decree or by a verdict handed down by a specialist. In the reigning monoculture, the entire world is considered to be a weed or a wild species: seemingly marginal, and apparently nonviable or useless. Yet, everything in it continues on: surviving, evolving, creating, repopulating and enriching the world when the right conditions are created, when we are able to undiscipline ourselves, when we learn to see what has been denied, and when, along with the necessary resistance, we also dare to build without asking for illegitimate permission.

For all of the above, I declare myself "*ecosystemic*," according to Morin's definition of the term – until someone finds a better name for the ungovernable desire to exercise the right to build a life, rather than spend a lifetime resisting the future. ♦

Camila Montecinos is a Chilean Agronomist who has worked with small farmers almost all her professional life. For many years she worked with a Chilean NGO, Centro de Educación y Tecnología (CET), the first NGO in Chile to work on sustainable agriculture and organic agriculture with small farmers. She then worked with CET SUR, a daughter NGO independent from CET, which works on the same broad issues but focuses on sustainable local development processes in Southern Chile. Camila joined GRAIN in March 2002. She became involved in biodiversity issues and the international debate in 1987, recognising its relevance to local farming systems. Her most earnest interest, though, is in local processes.



Sprouting up...

UPOV increases its grip on the South

GRAIN

As industrialised countries, in particular the United States, and the Union for the Protection of new Varieties of Plants (UPOV) continue to pressurise the South into providing intellectual property rights for breeders, two more countries have recently shown their willingness to join the Union. The Indian Government has decided to seek membership and the Philippines' legislature has adopted a UPOV-style Plant Variety Protection (PVP) law. The pressure stems from the requirement for countries to develop a *sui generis* system of protection for plant varieties under the Trade Related Intellectual Property Rights (TRIPS) Agreement of the World Trade Organisation (WTO). Despite countries not needing to comply with UPOV standards to meet their TRIPS requirements, they are being compelled to do so by external pressure.

...in India

On 31 May the Indian Cabinet approved the Government's decision to seek accession to UPOV. This means that India will need to submit its recently adopted law – the Protection of Plant Varieties and Farmer's Rights Act, 2001 (PVP&FR) – to the UPOV Council. The Council, which next meets in October, will then assess whether the law is in conformity with the UPOV Convention or requires amendment. Although the current PVP&FR Law of India is modelled on UPOV 1978, it does contain vague, and much criticised, references to farmers' rights, which go beyond what UPOV would allow under its *"farmer's privilege."* Most observers, including Indian government officials, expect UPOV to ask for changes in the law if India wants to push through with joining the Union which would entail a drastic trimming down of these farmers' provisions. However UPOV's main concern will also be to ensure that India does join up, being the one of the world's most populous countries. Despite 85% of all planted seed in India grown by farmer's themselves, it would appear that the interests of the farmers have once again been ignored.

...in the Philippines

A week later, on 7 June, the Philippines' Government signed into law the Plant Variety Protection Act, based on the 1991 Act of the UPOV Convention. The

Government says in its Press Release, that the Act *"is aimed at protecting and securing the exclusive rights of plant breeders with respect to their new plant variety, particularly when beneficial to people, through an effective intellectual property system."* Mario Denito, from MASIPAG in the Philippines (a national organisation which encourages farmer-led breeding) claimed that *"this PVP Act is not about enhancing food security nor agricultural research and development in the country; it is about organising, marketing and distributing of corporate controlled seeds and technologies for greater corporate profits."* A number of Philippine organisations have also accused a USAID funded think tank, Development Alternatives Inc. (their slogan is "Solving economic development problems worldwide,") of influencing the writing of the Bill to suit US interests. Although the Philippines has not yet sought to join UPOV, its legislation is ideally suited for membership.

To keep up with developments in UPOV, sign up for BIO-IPR. This is the GRAIN email list which circulates information about recent developments in the field of intellectual property rights related to biodiversity and associated knowledge. To get on the mailing list, send the word *"subscribe"* (no quotes) as the subject of an email message to bio-ipr-requests@cuenet.com or visit www.grain.org/about/subscribeipr.cfm

To see which countries have joined or are in the process of joining UPOV, are consulting UPOV, or have adopted national PVP legislation visit the GRAIN website (title of the page is *"PVP in the south: caving into UPOV"*) at: www.grain.org/publications/pvp-en.cfm (updated regularly)

Also visit the BRL – the Biodiversity Rights Legislation section of the GRAIN website. Here you will find a collection of emerging laws, updated regularly, that directly affect people's control over agricultural biodiversity in developing countries. There are now two ways of accessing the materials, by country or by type of law, all at www.grain.org/brl/ ♦



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One of the most significant positive changes that has occurred in the field of biodiversity over *Seedling's* 20-year lifetime is a global awakening to the importance of the local custodianship of biodiversity. Farmers and indigenous peoples finally began to feature in international treaties, policy documents and programme plans. The 'Growing Diversity Project' was launched to strengthen and exchange experiences in this field. After many years of planning and two busy years of activities, Growing Diversity has come to its official end with an international workshop held in Brazil in May.

GROWING Diversity

GRAIN



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The farmer fingered the lonely potted plant in the hotel lobby. With a frown on his forehead, he tore a leaf off, one of only six, crushed it in his hand and sniffed. This was a small but powerful example of the inquisitive nature of farmers – an example that shows why we have such rich diversity of farmed species and varieties around the world. This farmer was attending the Growing Diversity International Workshop in Brazil in May 2002. The workshop was the culmination of more than two years hard work from 37 countries involving more than 100 organisations and several thousand people, most of whom were farmers from the South. Of the 100 participants that attended, many were farmers who had never left their villages, communities or countries and most had travelled long distances to attend.

The Growing Diversity Project was officially launched in January 2000 by four organisations: Bread for the World, Crocevia, GRAIN, and the

Swedish Society for the Conservation of Nature. Its main objective to help empower and strengthen the groups involved in the local management of biodiversity in Africa, Asia and Latin America. But its roots go back further than that. During the 1980s and 1990s, calls for support for approaches that build on local biodiversity management started to trickle up into international agreements. The donor community – and even some of the Green Revolution institutions – started earmarking funds for on-farm biodiversity management strategies. Local and international NGOs also increasingly incorporated – or at least formalised – biodiversity management into their day-to-day activities.

But at the same time, other forces were steadily undermining the capacity of local communities to effectively manage their resources. These included various international agreements, trade pressures, increasing concentration within the agricultural supply industries, and the rapidly accelerating and destructive privatisation of biodiversity. The

Growing Diversity project was conceived to add momentum – and teeth – to the growing movement to support community control of biodiversity in ever more challenging times.

Originally 30 cases (or experiences as they were called) were planned to be part of the project. But due to overwhelming interest from farmers and organisations, this number soon doubled, and by the time of the workshop more than 80 cases had become incorporated. These cases cover a diverse range of issues, environments and agricultural systems - from rice in rainy Thailand to the date palms and fig trees of North Africa's deserts, and from Andean potatoes grown at 4000 metres to small-scale shark fishing off the coast of West Africa. Growing Diversity has absorbed not only a remarkable diversity of farmed and wild plants and animals, but also a diversity of experiences. Yet throughout the project, it became apparent that certain issues were shared by many of the participating farmers and organisations. Common problems and solutions have surfaced to reveal a diverse world with many similarities.

One common experience that all the participants shared was the reality that agricultural biodiversity is disappearing everywhere and that local control over that diversity is being undermined. Not only has three-quarters of the genetic diversity of agricultural crops been lost in the past century, but people's knowledge about the properties of plants and animals are being lost with them. Much has been written about the loss and destruction of agricultural biodiversity, and understanding about the value of these resources – locally and globally – is increasing and broadening all the time. But prescriptions for reversing the gene drain and restoring diversity are more limited. Growing Diversity provided this important function. Conceived and written by the farmers and their organisations, presented on the Growing Diversity website and exchanged between each other and the rest of the world, these experiences provide some impetus to help local groups and programme planners turn rhetoric into reality. The practical ideas, insights into common problems, and the developing synergy between organisations involved that has come out of Growing Diversity will all help to turn the current, more theoretical strategies to protect, conserve and use agricultural biodiversity into practical options for local communities.

Local control of biodiversity

One of the most important issues for the participants of the Growing Diversity Project was enabling people to control how and what they plant, grow, breed and harvest. The destruction

and loss of biodiversity is closely linked to the loss of control by communities of their resources. Many factors have contributed to the loss of control farmers and communities have faced over the past few decades. The promotion of commercial seeds, such as so called "*high yielding varieties (HYVs)*" and more recently genetically modified crops, has put the control firmly in the hands of the larger companies and institutions that develop the seeds. Using these seeds often demands the use of external inputs such as pesticides and fertilisers, again taking control out of farmers' hands. Credit for farmers is often conditional on the use of external inputs.

Agricultural research has also been biased towards the use of external technology – very little research involves the farmers and communities themselves. Such top-down research often ignores local cultures, traditions, diets and environments and results in seeds and practices that fail to live up to their promises. It also ignores and belittles the extensive knowledge that farmers have, and turns them into production workers rather than researchers and decision makers. Many families and communities feel a growing need, but decreasing capacity, to regain or retain this control over their farms and the genetic resources that they depend on. How are they going about it?

A common approach in the Growing Diversity cases is the establishment of centres where seeds can be freely exchanged between farmers and communities. For example in Bangladesh, the NGO UBINIG has set up one of the biggest community seed banks in the world (see p 24).

The loss of knowledge about how to grow, conserve and reproduce the seeds that have successfully fed successive generations was of great concern to many Growing Diversity participants. The migration of young people to the cities in search of better opportunities was a universal concern. With the loss of this knowledge, the seeds are also lost. At the international workshop many strategies were



Growing Diversity's original objectives

- * Provide a platform for discussion and **sharing experiences** among groups involved in the local management of biodiversity in order to learn from such experiences, identify bottlenecks and to articulate new strategies and approaches
- * Through this process, to help empower the groups involved and **strengthen local control**
- * **Raise awareness** about the central importance of biodiversity in rural livelihood systems and promote the incorporation of local biodiversity management systems in programmes and policies

presented on how to prevent the brain drain as well as the gene drain. These included education about the benefits of traditional varieties and the pitfalls of external technology such as genetically modified crops, in particular for younger generations; demonstration farms showing how abundant biodiversity can be beneficial to the community; workshops and seminars; and increased communication and networking. Given the weighty social and economic problems many communities face, such as chronic poverty, conflicts and wars, national debt and poor health, education efforts are challenging. But it was nevertheless agreed that education needs to remain a high priority.

Women – architects and animators

Women are central to Growing Diversity. In most countries and cultures, women are the invisible architects of diversity. They have been the ones largely responsible for selecting, collecting, regenerating and exchanging seed. Modern techniques and practices developed outside these farming communities often ignore the essential role that women play in the farming system. Until relatively recently, the critical role of women was almost invisible to programme planners and extension workers, who directed their activities towards men.

In 1987, the Women of Popenguine for the Protection of Nature (RFPPN) decided to get involved in the restoration of the Popenguine nature reserve in Senegal. This reserve was created in 1986 to rehabilitate an area heavily damaged by the excessive cutting of trees for firewood, overgrazing and drought. *“Without women this project would*

have not worked – women are the centre of its success” said Woulimata Thiaw, president of RFPPN. The results have been impressive. More than 195 species of bird and many other animals including the bush-tailed porcupine, jackal, Patas monkey, mongoose and the African civet have returned to the area, and more than 10 hectares of mangroves have been replanted. The area now conserved has extended well beyond the borders of the reserve into surrounding agricultural areas, involving more and more local villages in the scheme. Today, the cooperative has a membership of 1,500 women, involves around 35,000 women and covers an area of 100 km². Not only did biodiversity benefit, but so did the people. One of the strategies to restore biodiversity was through the establishment of tree nurseries for firewood, fruit trees and ornamental plants. The use of stones and fences helped to reduce soil erosion and restore fertility. An agreement was signed between the Senegalese government and the local communities, as a result of which, for the first time in the history of Senegal, tourism in the protected area now directly benefits the local communities.

Another project in which women have played a determining role has been that of the nut crackers in Brazil. This study illustrates how not only are women good for biodiversity, but biodiversity-based projects can also be good for women. The cracking of the Babaçu palm nuts (similar to coconuts) used to be considered a worthless job: *“We used to hide with shame about our jobs, but now we are proud of our work”* said one Babaçu cracker. Through cooperation in 31 communities and villages, the Babaçu crackers have now diversified their products, using all parts of the palm, such as in the production of moisturising oils. The conclusion of the participating communities is unanimous: *“over the years the project has taught us that it is possible to construct more just economic and social relations, where men and women through the use of their natural wealth, combined with environmental preservation, can build a better life.”*

Tradition, culture and spirituality

Tradition plays an important role in the understanding of how biodiversity can be conserved and developed. Cultural and spiritual rules and restrictions, such as the establishment of sacred places which cannot be harvested or destroyed, or days of rest to give the environment a chance to recover, have historically kept biodiversity in balance. In Africa, sacred forests have had an important place in many societies.

The Taï area in the south-west of the Côte d'Ivoire is covered with the vestiges of the original humid evergreen tropical forest of West Africa with a number of endemic species. It is situated in an



The women of Popenguine, Senegal in a meeting. “Without women, there is no biodiversity.” Woulimata Thiaw



Fishing out the gene pool

Amongst the contributions to the Growing Diversity project was the case of a group called the Young Fishermen from Lomé, in Togo. Abèti Tchao works for this cooperative.

Your cooperative works with fishermen who fish off the coast of Togo. What is the state of the fishery there?

In the past, fishermen along the coast of Togo used to be selective about the type of fish they would catch. But now, due to the decline in numbers of fish as a whole and the decline in many species, fishermen now will take any catch that they can.

What has caused this decline?

The biggest problem has been the poor management of the fisheries. With the general population increase, there is an ever increasing demand for fish, not only for human consumption but also for animal feed. There is also a lot of waste, because fishermen catch everything they can, and any surplus is wasted in the interests of maximising production. Large numbers of foreign trawlers fish both near the coast and further out to sea, often illegally. We are now obliged to fish further and further out to sea, up to 15 kilometres from the coast, where we need to use motorboats instead of sails. Overfishing by the industrial trawlers has decimated local fish stocks and put immense pressure on local fishermen. Some have resorted to the use of illegal fine mesh nets which catch even the smallest of fish. Many fishermen are ignorant of the extra damage they are doing to the fish populations and do not take account of the future.

How are you tackling these problems?

Our cooperative is raising the level of awareness amongst fishermen about the impact they have on fishing resources for the future. So far around 80% of fishermen are fully aware about the value of the fishing resources, but still around 20% are adding to the problems. Education is difficult as many fishermen are illiterate and we first need to teach them how to read and write. We also help with managing their finances.

What about women – do they fish or is it a job solely for men?

There have been one or two brave women who have fished, but it is the exception. Social norms keep women away from fishing itself, but women help to finance fishing activities by lending money to their husbands when they need to buy items such as nets. Men and women in Togo have quite separate finances, and the women are usually wealthier. Women tend to sell the fish or work in other small enterprises, or they work in the fields.



area which was entirely green at the beginning of the last century but has now been reduced to isolated remnants of forest because of the intense pressure which the region is under. These pressures are mainly related to population increases, poverty and social changes. Most of the remnant forest areas have survived because they are considered sacred. The sacred forest of Zaïpobly is one such zone: a dense humid forest from which no plant can be taken without prior permission. As a result, biological resources that are found there are well protected. This forest has many functions including protection of the village, a reserve for medicinal plants, and a place for holding meetings that are of high importance socio-culturally. The *Kwi* provides the mechanism for the traditional community

management of the sacred forest of Zaïpobly. This society is very hierarchical and its authority ensures the protection of natural resources. Despite the rapid disintegration of traditional social structures, the *Kwi* has managed to maintain control of the sacred forest. It relies on policing and punishing offenders, laying down strict rules and implementing drastic sanctions. Nevertheless, demographic pressure, lack of fertile land, and progressive changes in attitude are making their work more challenging than ever.

The importance of biodiversity beyond its economic value is manifested very clearly amongst communities in the Peruvian Andes. Here, the historical home of the potato, biodiversity itself is revered and the spiritual value of the potato tubers

is often much more important than their economic value. The seeds here are considered family members (see "Nurturing Seeds in the Peruvian Andes," *Seedling*, June 1998). For over 10,000 years in the Huaylas Canyon, Peru, farmers have meticulously conserved and improved their rich diversity of crops. The region supports 109 varieties of potatoes and many other cold-resistant tubers (49 varieties of *oca*, 12 varieties of *mashua* and 19 varieties of *olluco*), 26 varieties of maize, 6 varieties of quinoa, and more than 30 varieties of beans.

In Cambodia, destruction of forest has led to the loss of timber, fuel, food, and medicines and has caused soil erosion in the lowlands where rice is cultivated. In their efforts to reclaim local biodiversity and return to more sustainable farming systems, people have turned to monks and their pagodas (Buddhist places of worship). Pagodas generally have a pond, which provides fish for the paddy fields, and forests, which are an important source of seeds, medicinal plants and animals. Buddhist monks are now playing an important role in raising awareness of the importance of diverse production systems through workshops, study tours, and providing leaflets and books promoting reforestation.

Keeping the spirit alive

The Growing Diversity project has been an enormous success. Robert Ali Brac de la Perrière, North African regional coordinator of the project, echoed the thoughts of many when he said that: *"In North Africa, two years ago we had no links, no connections. Now people ... are starting to make plans to cooperate with each other. There is more interconnection between North and West Africa – and even the traditional distance between Francophone and Anglophone Africa has somehow been bridged."* It



Diverse varieties of potatoes on show at a regional Growing Diversity meeting in Colombia

is now important to keep Growing Diversity alive. Many informal networks have been established, many links between farmers have been made and many farmers have been empowered by what they have seen. Regional action plans were drawn up, and individual commitments made. Although the Growing Diversity project officially came to a close at the end of May, the spirit of Growing Diversity and the work will continue.

Regional meetings will be held in North and West Africa to disseminate the results of the international workshop. Follow up meetings will be held in several countries to discuss genetically modified organisms and intellectual property rights. Asian participants came up with a ten-point strategic plan, which included the establishment of seed exchanges, community seed banks and seed fairs. Networking was identified as a particular priority by Latin American participants. Education was a clear priority for all regions, with a particular emphasis on encouraging the young to be more involved in their local cultures and traditions. At the global level, participants are committed to campaigning against the introduction of genetically modified organisms and to fight against patents on life.

The new documentation and evidence that Growing Diversity has accumulated will make an important contribution to the growing body of evidence legitimising the claims for greater support for local initiatives to conserve and manage biodiversity. But perhaps the most exciting outcome of the Growing Diversity process is the synergy that it has helped to build between communities and organisations working to promote the local management of biodiversity. It has built foundations on which the growing movement can establish some firm pillars from which to continue to grow and strengthen. ♦

GMOs and Growing Diversity don't mix

Genetically modified organisms (GMOs) are a threat to Growing Diversity, for local people to control their biological resources, for women, for established traditions and cultures, and for agricultural biodiversity as a whole. All participants agreed that there was only one message and one voice on the question of GMOs which was included in their declaration at the end of the international workshop.

"We demand from our governments to ensure a GMO free environment in our countries and in our farming systems and to support our efforts to raise awareness amongst farmers and consumers about the real and potential impact of GMOs to the environment and to human health."

The full workshop statement – *"the Rio Branco Commitment"* is available in four languages and can be downloaded from the workshop website at: <http://www.amazonlink.org/gd/>





Growing Diversity Website

Growing Diversity has its own website at www.grain.org/gd. Available in English, French and Spanish, the website provides a summary of all the original cases and often with links to full details of the case in their original language. Full contact details of all the participants are also provided, and a wealth of photos of their experiences and the regional workshops. A links page also allows you to investigate other 'growing diversity' websites. The international workshop was covered in partnership with Amazonlink.org, a regional NGO from Acre, Brazil. This website, available at www.amazonlink.org/gd includes daily updates, interviews, campaigns, opinions and even more photos. A book has also been published summarising all the cases in three languages (contact the Barcelona office for more information).



The Growing Diversity International Workshop

The international workshop on the local control of agricultural biodiversity held in Rio Branco, Acre, Brazil in May 2002 brought the final project cases and experiences together. There were four main languages in use, in addition to the many local languages of the farmers themselves. Translators were on hand to translate simultaneously into English, French, Spanish and Portuguese, into and from which other languages were translated. The workshop required some impressive organisational and juggling skills on the part of the organising committee. The Workshop was organised in partnership with Pesacre, as part of the GTA-Acre-Amazonian Working Group, a network of many grassroots organisations working in the Brazilian Amazon.

All those attending found the sharing of experiences invaluable. As one participant said, "It feels like a family has come together, unlike other workshops and conferences." Another added "These exchanges between farmers from different environments and countries are very important – there is so much we can learn from each other."



Angela Cordeiro, coordinator of the Growing Diversity Project





Farida Akhtar is one of the founders of UBINIG, a Bangladeshi NGO which has set up one of the biggest community seed banks in the world. Here she talks to Seedling about their successes so far.

Tell us about the beginnings of UBINIG and the Naya Krishi Andolan.

The term “UBINIG” is the Bangla acronym of “Policy Research for Development Alternatives.” In the early 1980s, there was an urgent need to look for development alternatives and translate them into policy language in order to influence policy makers. At that time, the World Bank was pushing export-oriented policies and several sectors were being impacted. Shrimp farmers were being affected by large-scale shrimp operations and we were increasingly concerned about the environmental impact of commercial shrimp culture. Weavers and handloom workers were losing their jobs as the garment industry relied completely on imported cloth. We began to question whether the present approach was something that the people wanted.

UBINIG was set up in 1984.

After severe floods in 1988, farmers of Tangail District approached us for help. They had lost everything in the floods and needed to start all over again. They asked us for fertilisers, since they thought the “modern” way of growing food was the only option. We started having discussions with the village women and finding out what the problems really were and what the farmers needed. Our approach was to build on the ideas of “ecological agriculture” that were sprouting up in Europe and India. So the *Naya Krishi Andolan* – new agriculture movement – was born. The farmers coined the term themselves. This meant following ecological principles to produce food in harmony with nature. Women were the first to respond as they

had come face-to-face with excessive chemical use in agriculture. Midwives were especially concerned about miscarriages and other birth deformities. Then the small poor farmers responded to *Naya Krishi*, initially because they could not afford to buy chemicals.

Why the particular interest in agro-biodiversity?

Naya Krishi was not meant to be a quick fix technical solution. We had to do it, experience it and then keep it alive. For pest management and soil management, diversity was the obvious choice. As the farmers developed diverse cropping, they found many partner-plants coming up. The fish returned in the water and there were also other interesting results with cross-pollination. The birds were doing their job better! It was like a whole web of life being reactivated. Seed management is important to maintain diversity. There is a conscious policy to emphasise local seed varieties to facilitate seed exchanges. Because of careful seed management, we have more than a thousand varieties of rice, 37 vegetable varieties and more than 40 varieties of chillies alone.

How do you spread the word?

The farmers who practise *Naya Krishi* talk about it to others and give demonstrations. Bangla people have an appreciation of the gastronomic qualities of food, and when that improves, the new way of farming speaks for itself. In Bangla we say, we do not simply eat. We serve our body when we take food. The tongue is important not the teeth. This taste and variety is made possible by the mixture of cropping.

How is your approach to farming different?

Naya Krishi is not input-based. Modern agriculture is all about high yields and fashion foods. Our agriculture is about nurturing the seed. The main capital is not cash, but farmers’ knowledge. It is about restoring “culture” in agriculture. When you ask a farmer how many members there are in their family, the reply will be “1 son, 2 daughters, 2 cows, 5 chickens”...all in the same breath. Farming is about tending the whole family. It is about growing a particular kind of paddy because it makes good straw for your cow, even though it does not fetch a good price on the export market. Our approach to farming is more human, as opposed to motivated by greed, as modern agriculture is.

How do the network of community seed banks that you have set up work?



Farida Akhtar is one of the founders of UBINIG



We do not call them “seed banks,” but “community seed wealth centres.” We have one in each of our regional centres. They work on the basis of give and take. We exchange with the farmers, keeping just enough for a sample. We encourage a decentralised seed system. We do not want to create dependency on UBINIG or its seed centres. So in every village there is a seed hut where seed preservation and seed storage takes place. Individual households also have their own collections.

How many people are involved with the Naya Krishi Andolan?

It is growing every day. Today it spans over 16 districts and over 100,000 farming families (with an average of five members per family).

The Naya Krishi Andolan is renowned for the way it brings together people from a variety of cultures and religions. Why has it been so successful in doing so?

Bangladesh is 83% Muslim. But our culture imbibes principles from Buddhism and Hinduism. This mix is reflected in – and is important to – our agriculture. Songs are an important part of our work and community life. As a daily ritual we start the day with spiritual songs, with songs of Krishna who herds the cows...even though we are Muslims. A villager in these parts is happy only because there is song. Modern agriculture pollutes this cultural environment and gives no room or reason for song.

Why are women so important to the movement?

Modern agriculture disempowers women, making them a redundant part of the farming family. *Naya Krishi* thrives on women’s knowledge. And even in a patriarchal society like ours, women’s knowledge is being acknowledged in the decisions being made about which crop to grow at what time, in what way. Food security is not possible without women. Missing the crucial link between the seed and the woman is “bogus feminism”.

What is your role in the wider South Asian region?

We do not strive to set standards or be a model. And the South Asian region as a whole is rich in experience and new initiatives. There are several such examples from India, in the famed forest preservation of Himachal or the seed-saving work in Hyderabad. And there are important linkages to be made. That is why in 1996 in preparation of the World Food Summit we got together as

groups from South Asia under SANFEC – South Asia Network for Food Ecology and Culture. Our emphasis is equally on food, ecology and culture to keep diversity alive.

SANFEC members are against the patenting of life. There is no compromise on this position. The organisations comprising the membership of SANFEC are all those who are actually working with the people. We regularly interact. The farmers from all the South Asian countries are happy to meet and exchange seeds. The two premiers of India and Pakistan may not be on speaking terms, but our farmers are. We constantly hold biodiversity festivals and fairs together.

What are your long term goals?

Our effort comes from the realisation that so much has been lost; and so there is so much to bring back and there are so many ways to enhance our biodiversity. We want to establish our fight against the transnational corporations that are destroying agriculture and show that another life is possible. Biodiversity and diversity alone has the answers. ♦

“The two premiers of India and Pakistan may not be on speaking terms, but our farmers are.”

Principles and Rules of Naya Krishi Farming

1. Absolutely no pesticide use
2. Gradually eliminate the application of chemical fertilisers
3. Use multicropping or mixed cropping, inter-cropping, crop rotation, agro forestry and other methods to retain and enhance soil fertility and to enhance productivity
4. Practise agroforestry and the integration of fuel wood, fruit and various multipurpose trees along with rice and vegetable fields
5. Calculate total yield of the system
6. Recognise all domesticated and semi-domesticated animals and birds as members of the farming household
7. Agriculture is also aquaculture
8. Seeds and genetic resources are the common resources of the community and must be conserved at the household and community level
9. Water is wealth
10. Stop the use of deep tube wells and extraction of ground-water



Sprouting Up...

More summits and circuses

PATRICK MULVANY, ITDG

At the Food and Agriculture Organisation's (FAO) World Food Summit: Five Years Later (WFS+5), delegates acknowledged that there has indeed been no progress in reducing hunger since the World Food Summit six years ago, except perhaps in China. Cuban Foreign Minister, Felipe Pérez Roque echoed his leader Fidel Castro's words at the last summit when he pointed out: *"That there are, today, still 815m hungry people in the world is truly a crime. That the proposals we made nearly six years ago are now even further from being achieved is shameful."*

Worse, in Rome a month earlier, 20 leaders of the world's most powerful countries met at the NATO-Russia summit and agreed effectively to sustain the now \$800 billion global armaments industry, with no reference to the need to balance this with increased overseas development assistance. All but one of the leaders at that meeting stayed away from the World Food Summit. Nevertheless, the government saw it fit to stage a military operation of 16,000 police, carabinieri and soldiers put in place to contain the politicians and exclude the people. The 30,000-strong March for Food Sovereignty organised by Italian social movements was kept at a safe distance. Some intended participants could not even enter the country, because of increased visa problems. FAO became a military zone. And this emphasised the sense of oppression in the Summit.

The US left the Summit happy: they had achieved acceptance of the term *"biotechnology"* in the final declaration, with no reference to biosafety or the precautionary principle; had deleted any reference to an international legally-binding Code of Conduct on the Right to Food; and had watered down the call to ratify the new International Seed Treaty to something for countries *"to consider."* The final Declaration *"The International Alliance against Hunger"* restates the same old recipe now spiked with biotechnology. It does not propose any new legally-binding measures, nor does it commit the rich to paying more to help the poor.

Civil society, including farmers' organisations, rejected this Declaration and in their Forum developed a Food Sovereignty Action Agenda focused around: **Trade** - getting the WTO out of agriculture; **Genetic Resources**

- rejection of genetically modified organisms (GMOs) and Patents on Life and qualified support for the International Seed Treaty; **Agroecology** - developing a new approach to agriculture through locally-controlled, small-scale agroecological production; and developing a legally-binding **Right to Food**.

Genetic resources were high profile at the official Summit because of the pressure from the US government to gain acceptance of GMOs and life patents and partly because the International Seed Treaty was being promoted by FAO. It ended up with 47 new signatures (total now 57) and 7 ratifications.

Genetic resources were also prominent at the Civil Society Forum and side meetings. This time, the constituency was widened to include pastoralists and fisherfolk, who were concerned with the ongoing privatisation of resources, contamination from GMOs and impacts of the global trade agendas on local production systems. These were summarised in a background paper that built on the conclusions of CSOs at the sixth Conference of the Parties to the Convention on Biological Diversity in the Hague at which preparations were concluded for this Summit. These recommendations included a rejection of the use of genetic engineering technologies for plants, livestock and fish; a moratorium on their release into the environment and a ban on their release in Centres of Origin and Diversity of the world's food security crops; a ban on Terminator technologies and other genetic use restriction technologies (GURTs); a call to ban patents on life; and insistence that proposals to develop a *"Global Conservation Trust"* should include full participation of farmers' organisations and be under the rules and policies of the International Seed Treaty.

But the week gave no succour to the hungry. As a seasoned observer noted we should have no more Summits. The 1974 World Food Conference agreed to abolish hunger in 10 years. The 1996 World Food Summit committed to halving the number of malnourished people in 20 years. What would the next agree to?

For more information on the official declaration: www.fao.org/docrep/meeting/004/Y6948E.htm; on the Action Agenda: www.ukabc.org/accessgenres.pdf. ♦



Prajateerpu: A Citizens' Jury/ Scenario Workshop on Food Futures for Andhra Pradesh, India by Michel Pimbert and Tom Wakeford, IIED.



This is the report from the “citizens’ jury” on food and farming futures in Andhra Pradesh (AP), India, which took place in June 2001. Prajateerpu was an exercise in “deliberative democracy” involving people from all three regions of the state of AP. The UK-based International Institute for Environment and Development (IIED) and the Institute of Development Studies (IDS) were asked to facilitate a participatory process to encourage more public debate in policy choices on food futures in the state.

The central component of this exercise was a citizens’ jury made up of representatives of farmers from AP, small traders and food processors and consumers. To reflect the reality of rural AP, most of the jury members were small and marginal farmers and also included indigenous (known in India as *adivasi*) people. More than two thirds of the jury members were women.

The State of AP in South India is currently re-thinking its approach to farming, land use and marketing. The AP Government’s vision of the future of the State’s food system is presented in strategy papers and its so-called Vision 2020. Whilst fundamental and profound

transformations of the food system are proposed in Vision 2020, there has been little or no involvement of small farmers and rural people in shaping this policy scenario. In the citizen’s jury, members of the jury were presented with three different scenarios. Each was advocated by key opinion-formers who attempted to show the logic behind the scenario. It was up to the jury to decide which of the three scenarios was most likely to provide them with the best opportunities to enhance their livelihoods, food security and environment twenty years from now.

Vision 1: Vision 2020. This scenario was put forward by AP’s Chief Minister backed by a loan from the World Bank. It proposes to consolidate small farms and rapidly increase mechanisation and modernisation. Production enhancing technologies such as genetic modification would be introduced in farming and food processing, reducing the number of people on the land from 70% to 40% by 2020.

Vision 2: An export-based cash crop model of organic production. This vision of the future is based on proposals within IFOAM and the International Trade Centre (UNCTAD/WTO) for environmentally-friendly farming linked to national and international markets. This vision is also increasingly driven by the demand of supermarkets in the North to have a cheap supply of organic produce and comply with new eco-labelling standards.

Vision 3: Localised food systems. A future scenario based on increased self-reliance for rural communities, low external input agriculture, the re-localisation of food production, markets and local economies, with long distance trade in goods that are surplus to production or not produced locally. Support for this vision in India can be drawn from the writings of Mahatma Gandhi, indigenous peoples organisations

and some farmers unions in India and elsewhere.

And the verdict? The key conclusions reached by the jury – their ‘vision’ – included a desire for food and farming for self reliance and community control over resources. Their priorities included maintaining healthy soils, diverse crops, trees and livestock, and building on indigenous knowledge, practical skills and local institutions.

The report is priced at \$US 30 and is available from IIED, 3 Endsleigh Street, London, WC1H 0DD, UK
Phone: +44 20 7388-2117
Fax: +44 20 7388-2826
Email: mailboz@iied.org
The full report can be downloaded from: www.iied.org/agri/IIEDcitizenryAP.html

Reducing Food Poverty with Sustainable Agriculture: A summary of new evidence by Jules Pretty and Rachel Hines, University of Essex

This report outlines the spread of sustainable agriculture around the world and examines its potential to feed the ever-growing world population. The 140-page publication documents 208 case studies from 52 countries in the South. The authors calculate that sustainable agriculture is spreading fast. The case studies demonstrate clear increases in food production over some 29 million hectares (3% of the arable land in Latin America, Asia and Africa), with nearly 9 million households benefiting from increased food production and consumption. They say that this sustainably-farmed 29 million hectares has increased from only 100,000 hectares a decade ago.

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Securing the Harvest: Biotechnology breeding and seed systems for African crops

By Joseph DeVries and Gary Toenniessen, Rockefeller Foundation, 2001, CABI Publishing



This authoritative book on the potential of biotechnology in Africa is quite blatantly written from the Rockefeller Foundation perspective. Both authors work for Rockefeller in Kenya and the US. The Rockefeller Foundation recently refocused its research and work under the programme heading of Food Security and the goal of "To improve the food security of the rural poor through the generation of agricultural policies, institutions and innovations that will provide sustainable livelihoods in areas of sub-Saharan Africa, Asia and Latin America bypassed by the Green Revolution." Africa, and sub-Saharan Africa in particular, is the current focus of the Foundation.

The book will be of interest to a wide range of people in that it clearly shows the thinking and push behind food security and seed systems in Africa from an organisation that has considerable influence. The book starts with an overview of the situation in Africa, the production constraints, the diverse nature of the African environment, and the seed sector and seed policies. The tone starts off in a conciliatory manner, saying that, "The argument put forward in this text does not contend that better varieties alone are the answer to food insecurity in Africa." A section on plant breeding determines that although Africa was "bypassed by the Green Revolution,"

this was simply because the type of research and breeding were not appropriate for Africa's diverse cultures and environments. It also recognises that the answer in plant breeding does not lie in the mass production of a few varieties for use over large areas.

Instead, research needs to concentrate on producing many diverse varieties that have been developed with farmers. "One of the most important changes in breeding programmes for developing countries in recent times has not been based on genetics at all, but on the increased emphasis placed on the participation of farmers in the variety development and selection process." So far, so good. However, despite this admission, as the book progresses, biotechnology somehow emerges as the answer. More familiar Rockefeller-speak soon starts to dominate, as it talks in a concerned manner about the "... real possibility [that] the biotechnology revolution will pass Africa by much as the Green Revolution previously did."

After a chapter on the various ways of distributing seed, the last half of the book takes a closer look at the main crops: maize, sorghum, pearl millet, rice, cowpea, cassava, and banana. All aspects of each crop are examined, including a section on the biotechnology potential and those areas where more investment is needed.

Although the Rockefeller Foundation does not advocate for Africa the same type of Green Revolution techniques used in Asia and Latin America, the insistence of concentrating on a few crops and varieties is still there. The book appears to jump from an excellent overview of the problems faced by African farmers to an inappropriate solution: biotechnology.

NB: This book was frequently used as a source of reference in two of GRAIN's latest publications: GE in Africa and IPRs in Africa. Read an overview of them on page 29.

Available online in PDF format www.cabipublishing.org/Bookshop/ReadingRoom/0851995640.aspx or from CABI Publishing, CAB International, Wallingford, Oxfordshire OX10 8DE, UK

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Sustainable farming systems through traditional plant genetic resources and indigenous know- ledge based practices

By Ecological and Sustainable Farming Systems, Helvetas Sri Lanka.



This book is the product of an extensive survey of agricultural genetic resources amongst traditional farmers across 21 districts of Sri Lanka. This small island country, we learn, has about 24 agro-ecological regions and a valuable repository and crop germplasm. The intention of the publication is to "make the information on traditional agricultural methods available not only to farmers, who contributed during the survey, but also to everybody interested in conservation, production and utilisation of traditional seeds and agricultural plant species."

The authors are quite clearly unaffected by the debate in Sri Lanka's neighbouring India on whether or not to document such information. Their position is clear: "The present generation, already accustomed to the modern technology, is not prepared to carry the indigenous knowledge over to the next generation. Therefore, in view of its value to sustainable development, immediate



steps should be taken to collect, document and preserve the indigenous knowledge before it is lost forever."

The second chapter familiarises the reader with genetic and cultural diversity of the country. It is interesting to note how *"the multiethnic and religious nature of the country acts as a catalyst for accumulation of different indigenous knowledge and cultural practices that influence on use of genetic resources. It is widely accepted that different ethnic and cultural groups use genetic resources in different manner due to their various cultural and religious beliefs."* The result of this intermixing is manifested in the rich genetic and species diversity in the country.

The bulk of the text is in Chapter 3, on indigenous knowledge, which explores traditional agriculture; *Kem* methods and rituals (*Kem* is the talismanic and ritualistic practices developed in Sri Lankan folklore to protect humans, crops and livestock based on occult powers); seed conservation techniques and traditional food preparation methods. In its closing chapter, the need for *in situ* conservation of plant genetic resources is clearly reiterated; not only for the value of the dynamics the activity itself generates for the farmer and farming communities, but also for rendering value to *"static ex situ conservation."*

At the end, in tabulated form, the book details varieties of rice, grain species, pulses, local vegetables, leafy vegetables, yams, bananas and plantains, fruit species, spices and medicinal plants. The book adds an Asian signature by making reference to the 2,800 varieties of rice officially grown on the island.

The book hopes to inspire others to rejuvenate traditional ways in farming. It is a first-of-a-kind insight into farming life from a country down under.

Available from: Mr.S.Vaheesan,

Helvetas Sri Lanka, Swiss Association for International Cooperation Programme Office, 21 Raymond Road, Nugegoda 0170, Sri Lanka.

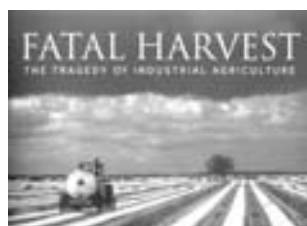
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Fatal Harvest: The tragedy of industrial agriculture.

Editor Andrew Kimbrell, Island Press.



Published by the Foundation for Deep Ecology, this large format photo book provides compelling evidence of the extensive and unnecessary costs, both human and ecological, of the US system of industrial agriculture and envisions food production in greater harmony with human communities and with the natural world. *Fatal Harvest*, with its stunning photos and penetrating essays, is a valuable tool to educate consumers and decision-makers on the deep costs of the US system of factory farming.

With essays by a diverse group of poets, ecologists, activists and chefs that include Wendell Berry, Hope Shand, Vandana Shiva and Alice Waters, the book begins with a deeply poetic and provocative section on breaking the industrial paradigm, and proceeds to upend the seven corporate myths of industrial agriculture. The total effect is a powerful vision of the biodiversity and the cultural, social and economic benefits of re-visioning agriculture.

Publication of the book is tied to a campaign in support of a new vision of farming. Led by the Center for Food Safety in Washington, DC, the national and international campaign will focus on supporting strong organic standards and

promoting local and small-scale agriculture that is biologically diverse, humane and socially just.

US\$45 paperback, US\$75 hard cover, discounts on bulk orders. Contact Island Press, 58440 Main Street, P.O. Box 7, Covelo, CA 95428, USA.

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From Rio to Johannesburg and Beyond : globalising precaution for genetically modified organisms.

By Volker Lehmann, Heinrich Böll Foundation.

This neatly written paper examines the effect of genetically modified organisms on the international use of the precautionary principle (PP). A background to PP is provided, in essence a European initiative for consumer protection, which is then followed by the various ways in which PP has been implemented in various and relevant international agreements, including the most recent WTO Doha agreement. In addition, Lehmann discusses how the cause of precaution can be strengthened in the up coming Johannesburg World Sustainable Development Summit. What is most striking about this publication though is the firm conclusion that many of the disagreements within international treaties stems uniquely from the unilateralist position of the USA. However, there is still a long way for PP to go to live up to its full potential.

Available from the Heinrich Böll Foundation, 1638 R Street, NW, Suite 120 Washington, DC, USA.

Tel.: 202 462 7512

Fax: 202 462 5230

Email: info@boell.org

Also available in PDF format at: www.boell.org/PrecautioninWTOandRIO.pdf or www.boell.org/451.htm ♦



What: World Summit on Sustainable Development (WSSD)
When: 26 August–4 September 2002
Where: Johannesburg, South Africa
Who: The tenth session of the UN Commission on Sustainable Development (CSD10)

The World Summit on Sustainable Development (WSSD) is the follow up to conference to the Earth Summit held in Rio in 1992. The summit will strive to answer some of the following questions: What accomplishments have been made since 1992? How have participating countries been implementing Agenda 21? Have they ratified the conventions they agreed to? What obstacles have they encountered? What lessons have they learned about what works and what does not work? What new issues have emerged to change the situation? Where should we focus further efforts?

Contact: Visit www.johannesburgsummit.org/ and www.iisd.ca/wssd/portal.htm

What: Second South-South bio-piracy summit – “Biopiracy – ten years post-Rio”
When: 22–23 August 2002
Where: Johannesburg, South Africa
Who: Biowatch, South Africa

The Second South-South Bio-piracy Summit is to be hosted by Biowatch South Africa on the 22–23 August 2002, just prior to the World Summit on Sustainable Development (WSSD). The aim is to raise awareness, enable information sharing, and build capacity on issues of access and benefit sharing, as well as to facilitate the development of mutual strategies and statements for the WSSD. The Summit will also provide an important opportunity to review the progress on implementation of the Convention on Biological Diversity (CBD), since its adoption in Rio ten years ago.

Contact: Adele Arendse, WSSD Project Co-ordinator, Biowatch

South Africa, Tel: +27 21 447 5939 Fax: +27 21 447 5974, email: adele@biowatch.org.za; Website: www.biowatch.org.za

What: People's Earth Summit
When: 26 August–4 September 2002
Where: Everywhere, and in Johannesburg in particular
Who: www.peopleearthsummit.net

A number of activities will be occurring around the world and at the WSSD summit itself organised by a range of different people and organisations. The Peoples Earth Summit in Johannesburg are organising a tantalising programme of activities by co-ordinating peoples' creative ways of demonstrating that “*another way is happening*”. People from across the world will witness the fact that in the last decade, millions of initiatives have developed the seeds of future pathways for humanity.

Contact: Visit www.peopleearthsummit.net or email info@peopleearthsummit.net

What: Letter campaign against the approved commercial release of Bt cotton in Colombia
When: Bt Cotton approved for release in March 2002
Where: Colombia
Who: National Technical Biosafety Board (CTN) of the Colombian Farming Institute (ICA) approved the commercial release of Bt Cotton.

In March 2002, the Colombian CTN (National Technical Biosafety Board) of the Colombian Farming Institute (ICA) bowed to Monsanto pressure. Not only did they change their board of directors in a secret ballot by electing a Monsanto representative as vice-president of the Board, but also they simultaneously voted to approve the commercial release of Bt Cotton. The decision that the Bt Cotton was deemed “*completely safe*” is all the more remarkable as there was only one risk evaluation of the crop over one growing period between October 2000 and February 2001.

Furthermore, the entire study was funded by Monsanto. Incensed by this obvious imposition of a genetically modified crop on a country, civil society organisations have reacted angrily. Currently a letter writing campaign has started to change this alarming situation. For more information:

Contact: Programa Semillas - Fundación Swissaid, Cll. 25C No. 3 - 81A, oficina 301, Edificio la Raqueta, Bogotá, A.A. 241662 Bogotá – Colombia, Telefax: +571 341 3153 / +571 336 3986, E-mail: semil@attglobal.net

What: Mining threatens biodiversity and livelihoods
When: Imminent
Where: Oriental Mindoro, Philippines
Who: Campaign against Canadian mining company starts up again.

A Canadian company threatens to exploit this Filipino island for nickel and cobalt. The total area exploited, more than 9,700 hectares, will have an impact on the entire island. Although the area is protected under a moratorium to protect the rich biodiversity of the area, the Canadian company has appealed to the courts, and the area is once again under threat.

Contact: Contact Edwin Gariguez, by email at pesante97@eudora.mail.com. There are also some websites which you can view such as: www.fivh.no/norwatch/english.asp?artID=605

What: Seedling's Action page
When: Now
Where: Everywhere
Who: You

We are eager to hear from readers about actions in your area or community for which you would like publicity. We are particularly interested in actions that relate to genetic resources in one way or another.

Contact: Janet Bell, Editor, *Seedling*. Email: seedling@grain.org ♦



A new look for Seedling

We thought it was about time we gave *Seedling* a new look – after all, its previous ‘look’ dates back almost as long as *Seedling* itself. Many thanks to everyone who took the trouble to give us feedback. We hope that in the new *Seedling* you see your suggestions reflected back at you. We would love to hear what you think of the changes. Don’t forget that if you have not yet resubscribed to the new *Seedling*, you need to do so soon to be kept on the mailing list. Write or send us an email to let us know (see the inside front cover).

Much of the old *Seedling* is still here – it just looks different. We have tried to liven it up without losing the essence of the old *Seedling*. We have added a few new sections – like this one. The “Home Page” is nothing to do with the web – it just seemed to be the perfect name for a page linking *Seedling* back to its roots in GRAIN, so that you get a better sense of who we are and what GRAIN does. In this section we will keep you updated on what’s happening in GRAIN – activities we are involved in, new publications we produce, etc. In the new *Seedling*, we have included an editorial in response to requests for more opinion and analysis. The interview section is also new and we decided to have a little fun by selecting our interviewees alphabetically. Feel free to give us ideas on people you would like to see included.

GRAIN has changed a great deal in the last 20 years. While the issues have got bigger, we have – deliberately – remained small, expanding from the original two employees to our current twelve. Instead, we have sought to expand our influence by networking and linking in to regional processes. As mentioned in the editorial, our regionalisation process has changed our focus and our ways of working. We now have no more than three people working in one place, and GRAIN staff scattered around the globe, from Chile to Benin to the Philippines. We will introduce the different people that form GRAIN over time on this page. For more details on who we are, have a look at the “about us” section on our web site at www.grain.org. ♦



JANET BELL

Editor Janet Bell explaining to her sons why she has been working so hard recently



The early days: first there was just Henk Hobbelink and Renée Vellvé working out of a small office in Barcelona, Spain



GRAIN today: the Los Baños team in the Philippines (from left to right): Lene Santos, Renée Vellvé and Noemi Gaddi

Problems of piracy & protection

GRAIN has teamed up with the Indian NGO. Kalpavriksh, to produce a report on the biopiracy of traditional knowledge associated with plant genetic resources in Asia and the Pacific region. Biopiracy is steadily increasing in the region, particularly in those areas rich in genetic diversity. The report examines the more widely documented practice of North–South biopiracy (where the US is the leading culprit), but also highlights less familiar tales of South–South biopiracy, especially where the same (or similar) resources are shared. The report will be available in August 2002 on the GRAIN website at:

www.grain.org/publications/tk-asia-2002-en.cfm For a hard copy, contact GRAIN.



The world according to Growing Diversity.....

