



DAG HAMMARSKJÖLD FOUNDATION

What Next?

Draft thematic paper

The Practice of Earth Democracy

Vandana Shiva

Over the past three decades, I have tried to live by transcending polarities – between people and planet, between modern science and indigenous knowledge, between environment and ‘development’, between North and South, between local and global.

The institutions and movements I have helped to build over the past decades have been inspired by the urge to seed new imagination and possibilities, open up new spaces and new synergies for planetary citizenship based on our duty to care for the earth, her ecosystems and her diverse species, including our own.

In 1982, when I left an academic career, to found the Research Foundation for Science, Technology and Ecology, I was troubled by the Baconian mark of ‘knowledge with power’. My involvement with the Chipko movement about which I have written in *Staying Alive*, had taught us that the powerless are not powerless due to ignorance but due to the appropriation of their resources by the powerful.¹ I have often called Chipko my University of Ecology and the women of Chipko my Professors, even though they had never been to school, and I have a doctorate in Quantum Physics. I learnt in the 1970s that literacy is not a prerequisite for knowledge, and ordinary tribals, peasants and women have tremendous ecological knowledge based on their experience. They are biodiversity experts, seed experts, soil experts, water experts. The blindness of dominant systems to their knowledge and expertise is not proof of the ignorance of the poor and powerless. It is in fact proof of the ignorance of the rich and powerful.

Not only do the marginalised have knowledge; but also they are the only ones who have knowledge about the roots and causes of their marginalisation and poverty. The women of Chipko know that their growing poverty and scarcity of water, fuel and fodder is linked directly to the profits of the logging industry. And that is why they hugged trees to stop the commercial logging. After a decade of resistance, the Government of India finally took action in 1981 and imposed a ban on logging above 1000 meters in the fragile central Himalayas, the source of the mighty rivers Ganga and Yamuna and their tributaries.

The Research Foundation for Science, Technology and Ecology grew out of the confidence and trust that all people have expertise and knowledge. The participatory research it carries out deals with authentic problems and issues as opposed to conventional research, which is usually carried out in the ivory tower of privileged academic institutions. The foundation was started in my mother’s cowshed in my birthplace and hometown, Dehradun. I left Bangalore, the ‘Silicon Valley’ of India, returned home to the Himalayas, and started the experiment to connect research-based knowledge and the powerless. Instead of deriving support and strength from big money, the Foundation drew its strength and support from local communities. In turn it gave them and their struggles strength and support through research. This mutualism, this connection of research and action, has sustained our work over more than two decades. And it has proven to be effective. The Doon Valley has been declared a Green Zone and limestone mining has been stopped. The established forestry, aquaculture and agriculture paradigms have shifted from monoculture to

¹ Shiva, V., *Staying Alive: Women, Ecology and Development*, Zed, London, 1989.

diversity and from commerce to sustenance. The dominant intellectual property rights paradigm has been challenged and cases won against neem and basmati biopiracy. And our only asset was my mother's cowshed and the partnership between researchers and people's movements.

The participatory research carried out through the Research Foundation did not just have an impact at the local and national level. It also had an impact at the global level. Our work in India on social forestry and eucalyptus monocultures played a big role in shaping the World Rain Forest Movement, a global movement to protect the rainforests and resist the World Bank's Tropical Forest Action Plan. This USD 8 billion plan has been criticised by many for contributing to tropical deforestation. Similarly our work in India on the Green Revolution became a major input in building the global resistance to genetically engineered crops. By championing the knowledge and perspectives of local communities it became clear that technological approaches that are not controlled by communities are not part of the solution to world hunger but rather part of the problem. Our way of working has not just overcome the false divide between knowledge and action. It has also contributed to overcoming the North-South polarisation created by capital and colonialism. We are proud to be part of the emerging global movements that are connected through our common concerns and common humanity. Knowledge rooted in the earth and in the local has helped nourish a new global solidarity of earth citizenship, based on our care of the earth and compassion for each other.

The Green Revolution and its disastrous effects

1984 was truly Orwellian. The Green Revolution, awarded a Nobel Prize for Peace in 1970, has contributed to two social and environmental disasters in India. One was the extremist movement and terrorism in Punjab that led to the military assault on the Golden Temple and finally the assassination of Indira Gandhi in 1984. The other was the gas leak from the Union Carbide pesticides plant in Bhopal, which killed 3,000 people on that tragic night of December 1984. In the two decades since that tragedy, 30,000 people have died in Bhopal due to the leak of these toxic gases. The Punjab violence also took the lives of 30,000 people in the years following 1984.

Why did a 'Revolution' awarded a Nobel Peace Prize lead to so much violence? The Green Revolution came with a promise of peace. But its crude linearity – Technology → Prosperity → Peace – failed. The reason for this failure was that the technologies of the Green Revolution, such as technologies of war, leave nature and society impoverished. To expect prosperity to grow out of violent technologies that destroy the earth, erode biodiversity, deplete and pollute water and leave peasants indebted and in ruins was a false assumption made during the launch of the Green Revolution. This false assumption is being repeated in the launch of the Second Green Revolution based on biotechnology and genetic engineering.

The 'terrorism' and 'extremism' in Punjab was born out of the experience of injustice of the Green Revolution as a development model, which centralised

power and appropriated resources and earth from the people. In the words of Gurmata from the All Sikh Convention on 13 April 1986:

If the hard-earned income of the people or the natural resources of any nation or the region are forcibly plundered; if the goods produced by them are paid for at arbitrarily determined prices while the goods bought are sold at higher prices and if, in order to carry this process of economic exploitation to its logical conclusion, the human rights of a nation, region or people are lost then the people will be – like the Sikhs today - shackled by the chains of slavery.²

The peasants and people of Punjab were clearly not experiencing the Green Revolution as a source of prosperity and freedom. For them it was slavery. The Green Revolution, the social and ecological impacts it had, and the responses it created among an angry and disillusioned peasantry, have many lessons for our times, both for understanding the roots of terrorism and searching for solutions to violence.

The work on the Green Revolution that the Research Foundation did with the people's movements became a link to the debate and struggles related to the emerging biotechnologies. In 1987, the Dag Hammarskjöld Foundation, along with the Rural Advancement Foundation International (RAFI, now the ETC group – Action Group on Erosion, Technology and Concentration) organised a conference on Biotechnology called 'The Laws of Life'. Besides researchers/activists like myself, the participants included UN officials and representatives of the biotech industry. The presentations made by the industry's representatives made it clear to us that they were using genetic engineering as an instrument of control. This is why they were pushing for intellectual property rights to form part of the GATT (General Agreement on Trade and Tariffs), which became the Trade Related Intellectual Property Rights Agreement of the World Trade Organization (WTO).

Gandhi's legacy, humanity's hope

Gandhi lives – as a perennial source of inspiration and political innovation to defend our freedoms. Corporate globalisation as a project is a plan to extinguish all freedoms of people through the total control of trade, technology and property rights. It threatens the freedom of rivers to flow and organisms to evolve, of farmers to save seeds and grow crops, of consumers to be free to choose what they eat and know how their food is produced. These fundamental freedoms of all species and ordinary humans are being stolen in the name of 'free trade' and of globalisation.

This globalisation is often presented as a process of new interconnections between societies. However, to the extent that it is geographical, it is actually about the global reach of giant corporations – not about a global joining of the hearts of people worldwide. The real project of this globalisation is colonisation

² Quoted in Shiva, V., *The Violence of the Green Revolution: Third World Agriculture, Ecology, and Politics*, Penang, Third World Network, 1991.

and commodification of the very resources and processes that give us life – our biodiversity, our food, our water.

Over the past two decades, my ideas and actions to defend life's freedom and diversity have come from Gandhi. Without his legacy it would be impossible even to imagine a response to the totalitarianism built into the project of owning life, owning seeds, owning water. Patents on life and the new biotechnologies are today's tools of imperialism. They are a core part of the global 'constitution' called the WTO rules of free trade in the form of Trade-Related Intellectual Property Rights (TRIPs). The term 'trade-related' had to be deliberately linked to intellectual property precisely because intellectual property has no place in a trade treaty. Nor should patents have been extended to cover life forms as they were under Act 273(b) of TRIPs. This act forces WTO member countries to patent life forms, in particular micro-organisms and genetically engineered plants and animals. These rules and laws were made by and for corporations. As a Monsanto spokesperson stated, concerning the drafting of TRIPs: 'We were the patient, the diagnostician, the physician.'

Patents of life are a total control system. They allow corporations to claim ownership over life forms – micro-organisms, plants and animals. They allow corporations to define the acts of saving and sharing seeds as 'intellectual property crimes'. And they allow the crime of biopiracy – the theft of traditional knowledge – to be treated as a right.

A patent confers the exclusive right to own, make, sell, produce and use a particular product. A patent on seed implies that a farmer saving seed is 'an intellectual property thief'. But it means more. A system in which seed has become a corporate monopoly, a system in which a few companies control the seed supply is in effect a system of slavery for farmers. Where the freedom of seed disappears, the freedom of farmers disappears.

This is why, in 1987, when I first came to know about GATT and TRIPs and patents on life, I searched for ways to defend the freedom of biodiversity and the freedom of peasants. And it was Gandhi's spinning wheel that inspired me to dedicate my life to saving seeds to save small farmers and protect life.

Spinning freedom

It was to regenerate livelihoods in India that Gandhi thought of the spinning wheel as a symbol of liberation and a means of generating self-reliant livelihoods. Power-driven mills were the symbol of development in that period of early industrialisation. However, the hunger of mills for raw material and markets destroyed livelihoods and caused a new poverty. This was done both by diverting land and biomass from local subsistence to the factory and by displacing local production through the market.

Gandhi had said, 'Anything that millions can do together, becomes charged with unique power.' The spinning wheel had become a symbol of such power. 'The wheel as such is lifeless, but when I invest it with symbolism, it becomes a living thing for me.'

In 1908, when Gandhi described the *charkha* (spinning wheel) and the *Hind Swaraj* (self-rule for India) as a panacea for the growing pauperism of India, he had never seen a spinning wheel. Even in 1915, when he returned to India from South Africa, he had not actually seen a spinning wheel. But he saw an essential element of freedom from colonialism in discarding the use of mill-woven cloth. He set up handlooms in the Satyagraha Ashram at Sabarmati, but could not find a spinning wheel or any spinners, who were normally women. In 1917, Gandhi's disciple Ganga Behn Majumdar started a search for the spinning wheel, and found one in Vijapur in Baroda State. Quite a few people there had spinning wheels in their homes, but had long since consigned them to the lofts as useless lumber. They now pulled them out, and soon Vijapur *khadi* (hand-spun, hand-woven cloth) gained a name for itself. And the *khadi* and the *charkha* rapidly became the symbol of India's independence movement.

The spinning wheel symbolised a technology that conserves resources, people's livelihoods and people's control over their livelihoods. In contrast to the imperialism of the British textile industry, the *charkha* was decentred and labour-generating, not labour-displacing. It needed people's hands and mind's, instead of treating them as surplus, or as mere inputs into an industrial process. This critical mixture of decentredness, livelihood generation, resource conservation and strengthening of self-reliance were essential to undo the waste of centralisation, livelihood destruction, resource depletion and economic and political dependence that had been engendered by the industrialisation associated with colonialism.

Gandhi's spinning wheel is a challenge to notions of progress and obsolescence that arise from absolutism and false universalism, concepts on which the development of science and technology are based. Obsolescence and waste are social constructs that have both a political and an ecological component. Politically, the notion of obsolescence gets rid of people's control over their lives and livelihoods by defining productive work as unproductive and removing people's control over production in the name of progress. It would rather waste hands than waste time. Ecologically, obsolescence destroys the regenerative capacity of nature by substituting her diversity with manufactured uniformity. This induced dispensability of poorer people on the one hand and diversity on the other constitute the political ecology of technological development guided by narrow and reductionist notions of productivity. Parochial notions of productivity, claimed to be universal, rob people of their control over the means of reproducing life and rob nature of her capacity to regenerate diversity.

Ecological erosion and destruction of livelihoods are linked to one another. Displacement of diversity and displacement of people's sources of sustenance both arise from a view of development and growth based on uniformity created through centralised control. In this process of control, reductionist science and technology act as handmaidens for economically powerful interests. The struggle between the factory and the spinning wheel continues as new technologies emerge.

As seeds are genetically engineered and patented, a crisis is being engineered for farmers and farming. In response the seed becomes the *charkha* of today. For this reason Navdanya, a national movement to save seed diversity in farmers' fields, was started in 1987.

Box
Some Gandhian terms and concepts

Khadi – hand-spun, hand-woven cloth

Charkha – spinning wheel

Hind Swaraj – self-rule for India

Swadeshi – self-made, self-reliance. It included the drive to use only Indian products, nothing foreign-made.

Sarvodaya – a movement 'for the upliftment of all', especially active during the 1950s

Satyagraha – struggle for truth and against injustice, based on non-violent civil disobedience

End of box

Navdanya: Seeds of freedom, seeds of change

The Green Revolution was an example of the deliberate destruction of diversity. The new biotechnologies are repeating and deepening these tendencies rather than reversing them.

Further, the new technologies, in combination with patent monopolies being pushed through intellectual property rights regimes in the WTO, TRIPS and other trade platforms, as well as the Convention on Biological Diversity (CBD), are threatening to transform the diversity of life forms into mere raw material for industrial production, and limitless profits. They are simultaneously threatening the regenerative freedom of diverse species and the free and sustainable economy of small peasants and producers, which is based on nature's diversity and its utilisation.

Seed, for example, reproduces itself and multiplies. Farmers use seed as food grain as well as for the next year's crop. Seed is free, both in the ecological sense of reproducing itself, as well as in the economic sense of reproducing the farmer's livelihood.

This seed freedom is, however, a major obstacle for seed corporations. If the market for seed is to be created, the seed has to be transformed materially, so that reproducibility is blocked. Also, its status has to be changed legally from

being the common property of farming communities to the patented private property of seed corporations.

As my involvement in these issues grew, the seed started to take shape as the site and symbol of freedom in the age of manipulation and monopoly of life in all its diversity. Ethically and ecologically, unrestrained biotechnology development gives new tools for manipulation; patents offer new tools for monopoly ownership of that which is by its very nature free. I thought of Gandhi's spinning wheel, which had become such an important symbol of freedom, not because it was big and powerful, but because it was small and could become alive as a sign of resistance and creativity in the smallest of huts and poorest of families. In smallness lay its power.

The seed too is small. It embodies diversity. It embodies the freedom to stay alive. And seed is still the common property of small farmers in India. Seed freedom goes far beyond freedom for the farmer from corporations. It also represents the freedom of diverse cultures from centralised control. In the seed, ecological issues can combine with social justice. I could see that it was the seed that could play the role of Gandhi's spinning wheel in this period of recolonisation through 'free trade'.

In spite of many blocks and pressures, many movements joined together to launch a national programme to save seed diversity in farmers' fields. We call it Navdanya, which literally means 'nine seeds'. These represent India's collective source of food security, connoting a diverse ecological balance at every level – from the ecology of the earth to the ecology of our bodies. (For more information visit www.navdanya.org) It is a beautiful symbol of the richness of diversity.

Ours was not the first seed conservation programme. Farmers have always collected genetic resources for breeding. In the 1970s the risks for breeding towards uniformity led to the emergence of government gene banks. However, while gene banks collect biodiversity from farmers' fields, they do not conserve it through and with farmers. Instead, diversity flows from farmers' fields to gene banks and then on to corporate breeders. Biodiversity is systematically eroded at the source, turning farmers into mere consumers of corporate seed. In the future this seed will also have intellectual property rights protection, forcing farmers to buy seed every year. This excludes the farmer from playing the critical role of conservator of genetic diversity and innovator in the utilisation and development of seed. It robs farmers of their rights to their biological and intellectual heritage. It also separates conservation from production, and scientists from farmers. Navdanya wanted to build a programme in which farmers and scientists relate horizontally rather than vertically, in which conservation of biodiversity and production of food go hand in hand, and in which farmers' knowledge is strengthened, not stolen.

While the fundamental changes we are working towards can only be achieved in the long term, at the small-scale level, Navdanya has already had a major impact in the villages where we work. Realising that our small efforts in the conservation of indigenous seed diversity are not enough, we have also joined hands with the farmers' movement to urgently mobilise public opinion against

the emerging threat of multinational corporations gaining monopoly control on all life through the new biotechnologies and intellectual property rights.

In 1991, we started to collaborate with farmers' organisations, to increase public awareness of the new trends and to work with them on protecting farmers' rights to freely conserve, use, exchange and modify seeds. In February 1992, we organised a national conference on GATT and agriculture with the Karnataka Rajya Ryota Sangha (KRRS), a farmer's organisation in Karnataka State. In October 1992, at a massive farmers' rally in Hospet organised by the KRRS, the seed *satyagraha* was launched, following Gandhi's politics of *Satyagraha* as a struggle for truth based on non-cooperation with unjust regimes. In March 1993, we helped organise a national rally in Delhi at the historic Red Fort under the leadership of the national farmers' organisation, the Bharatiya Kisan Union. Independence Day 15 August 1993 was celebrated with farmers asserting their 'Collective Intellectual Property Rights' (*Samuhik Gyan Sanad*). On 2 October 1993, one year of the seed *satyagraha* was celebrated in Bangalore with a gathering of 500,000 farmers. This was also attended by farmers from other Third World countries as well as scientists who work on the farmers' rights and sustainable agriculture in an expression of solidarity. The internationalisation of the seed *satyagraha* within one year has given the word 'globalisation' a new meaning. From representing global markets as in the parlance of free trade proponents, it has come to mean for us the globalisation of people's resistance to centralised control over all aspects of their lives.

The native seed has become a symbol of resistance against monocultures and monopoly rights. The shift from uniformity to diversity respects the rights of all species and is sustainable. Diversity is also a political imperative because uniformity goes hand in hand with centralisation, while diversity demands decentred control. Diversity, in ways of thinking and in ways of living, is what is needed to go beyond the impoverished monocultures of the mind.

For us, protecting native seeds is more than conservation of raw material for the biotechnology industry. The diverse seeds now being pushed to extinction carry within them seeds of other ways of thinking about nature and other ways of producing for our needs. Uniformity and diversity are not just patterns of land use; they are ways of thinking and ways of living.

Conservation of diversity is, above all, the commitment to let alternatives flourish in society and nature, in economic systems and in knowledge systems. Cultivating and conserving diversity is no luxury in our times. It is a survival imperative, and the precondition for the freedom of all, big and small. In diversity, the smallest has a place and is significant. Allowing the small to flourish is, I believe, the real test of freedom – in the life of an individual, the life of an organisation, the life of a society, and the life of this planet. It is this connection between diversity, decentredness and democracy that has guided our ideas and actions, at the local as well as the global level.

Seed-saving: Our ethical duty, our human right

Seed is the first link in the food chain. In Sanskrit, *bija*, the seed, means the source of life. Saving seed is our duty; sharing seed is our culture.

Patents on seeds and genetic resources rob us of our birthright to derive our livelihoods from the land because patents transform seed-saving and seed-sharing into 'intellectual property crimes'. This is an assault on our culture, our human rights, our very survival.

Seed patents and seed monopolies are also becoming a major source of seed and food insecurity. As seed is transformed from the common property of peasant communities into the private property of giant corporations like Monsanto, a number of associated transformations take place.

For example the shift from farmer-saved seed to corporate monopolies of the seed supply is also a shift from biodiversity to monocultures in agriculture. The District of Warangal in Andhra Pradesh used to grow diverse legumes, millets and oilseeds. Seed monopolies created crop monocultures of cotton, leading to the disappearance of millions of nature's evolved and farmers' bred seeds.

Monocultures and uniformity increase the risks of crop failure. Diverse seeds adapted to diverse ecosystems are replaced by the rushed introduction of unadapted and often untested seeds into the market. When Monsanto first introduced the genetically modified variety Bt cotton in India in 2002, the farmers lost Rs. 1 billion due to crop failure. Instead of 1,500 kg/acre as promised by the company, the harvest was as low as 200 kg. Instead of increased incomes of Rs. 10,000/acre, farmers ran into losses of Rs. 6,400/acre.

In the state of Bihar, when farmer-saved corn seed was displaced by Monsanto's hybrid corn, the entire crop failed, resulting in a loss of Rs. 4 billion and increased poverty for already desperately poor farmers.

Poor peasants and farmers around the world cannot survive seed monopolies. That is why the case of Percy Schmeiser will decide the fate not just of one Canadian farmer but billions of peasants. The unjust and unethical case brought by Monsanto against Percy, whose fields were contaminated by Monsanto's genetically modified canola seed, is a double crime against farmers. Firstly by creating and enforcing illegitimate patent rights to seed, it robs us of our human right and human duty to be seed savers. Secondly, it rewards the polluter with enhanced property rights and profits. The principle of 'the polluter pays' has been transformed into 'the polluter gets paid' principle.

This perverse jurisprudence must be corrected for the sake of all farmers and all species. Farmers' freedoms must come before corporate monopoly. Farmers' survival must come before corporate greed. Percy's future is our future and his seed freedom is our freedom. Percy's rights as a farmer are symbolic of the human rights of all farmers.

The suicide economy of corporate globalisation

While the government spends millions on advertisements claiming that ‘India’s shining’, a large part of India is dying. The Indian peasantry, the largest body of surviving small farmers in the world, today faces a crisis of extinction.

Two thirds of India makes a living from the land that has been farmed for more than 5,000 years. The earth is the most generous employer in this country of a billion people.

However, as farming is delinked from the earth, the soil, the biodiversity and the climate, and linked to global corporations and global markets, and as the generosity of the earth is replaced by the greed of corporations, the viability of small farmers and small farms is destroyed. Farmers’ suicides are the most tragic and dramatic symptom of the crisis of survival faced by Indian peasants.

1997 witnessed the first emergence of farm suicides in India. The rapid increase in indebtedness was at the root of farmers taking their lives. Debt is a reflection of a negative economy, a loosing economy. Two factors have transformed the positive economy of agriculture into a negative economy for peasants – the rising costs of production and the falling prices for farm commodities. Both these factors are rooted in the policies of trade liberalisation and corporate globalisation.

In 1998, the World Bank’s structural adjustment policies forced India to open up its seed sector to global corporations like Cargill, Monsanto, Syngenta. The global corporations changed the input economy overnight. Their corporate seeds were marketed through government agencies, and indigenous religions, beliefs and myths were used to convince farmers. Farmers were seduced by advertising and given false promises of becoming millionaires. In this way farmer-saved seeds were replaced by corporate seeds, which needed fertilisers and pesticides and could not be saved. (Today new laws are being drafted to prevent farmers from growing their native seeds.)

As saving of corporate seed is prevented by patents as well as by the engineering of seed with non-renewable traits, this seed has to be bought for every planting season by poor peasants. What had been a free resource available to poor peasants on farm becomes a commodity which farmers are forced to buy every year. This has increased poverty and led to indebtedness. As debts increase and become unpayable, farmers become increasingly desperate. Many have felt compelled to sell a kidney or even to commit suicide. More than 25,000 peasants in India have taken their own lives since 1997 (source?) when the practice of seed-saving was transformed under corporate globalisation pressures and multinational seed corporations started to take control of the seed supply.³ Seed-saving gives farmers life. Seed monopolies rob farmers of life.

This crisis of suicides is a clear indication that the survival of small farmers is incompatible with the seed monopolies of global corporations.

³ See for example, *The Hindu*, May 09, 2006 and www.indiaresource.org/news/2005/2017.html.

Another pressure Indian farmers are facing is the dramatic fall in prices of farm produce as a result of the WTO's free trade policies. The WTO rules for trade in agriculture are in essence rules for dumping. They have allowed an increase in government subsidies to agribusiness and at the same time prevented countries from protecting their farmers from the dumping of artificially cheap produce. High farm subsidies of USD 400 billion given by OECD countries combined with the forced removal of import restrictions are a ready-made recipe for farmers' suicides. Between 1995 and 2001 global prices have dropped from USD 216 per ton to USD 133 per ton for wheat, USD 98.2 per ton to USD 49.1 per ton for cotton and USD 273 per ton to USD 178 per ton for soya bean. This reduction to half the price is not due to a doubling in productivity but rather to an increase in subsidies and an increase in market monopolies controlled by a handful of agribusiness corporations.

Because the US government pays USD 193 per ton to US soya farmers, the price of soya is artificially lowered. The removal of quantitative restrictions and lowering of tariffs have led to increased imports of this subsidised soya, which has in turn destroyed the livelihoods of coconut growers, mustard farmers, as well as producers of sesame, groundnut and soya. Similarly, 25,000 cotton producers in the US receive a subsidy of USD 4 billion annually. This has brought the cotton prices down artificially, allowing the US to capture world markets that earlier were accessible to poor African countries such as Burkina Faso, Benin and Mali. The subsidy of USD 230 per acre in the US is genocidal for African farmers. African cotton farmers are losing USD 250 million every year. That is why small African countries walked out of the Cancun negotiations in 2003, leading to the collapse of the WTO ministerial.

The rigged prices of globally traded agriculture commodities are stealing incomes from poor peasants of the South. Analysis carried out by the Research Foundation for Science, Technology and Ecology shows that due to falling farm prices, Indian peasants are losing USD 26 billion or Rs. 1.2 trillion annually. This is a burden their poverty does not allow them to bear: hence the epidemic of farmers' suicides.

India was among the countries that questioned the unfair rules of WTO in agriculture and led the G-22 alliance along with Brazil and China. India with other Southern countries addressed the need to safeguard the livelihoods of small farmers everywhere in the world from the injustice of 'free' trade based on high subsidies to agribusiness and dumping. Yet at the domestic level, official agencies in India are in deep denial of any links between 'free' trade and farmers' survival.

An example of this denial is a report commissioned by the Government of Karnataka: 'Farmers suicide in Karnataka – A scientific analysis'. Though claiming to be 'scientific', this expert report was full of inconsistencies – downplaying the number of farmers in debt and greatly exaggerating the number of 'alcoholic and illicit drinkers'. In this way they were able to conclude that the 3,500 suicides in the five districts during 2000/2001 were primarily a result of farmers' bad habits and did not have economic causes. Therefore, instead of proposing changes in agricultural policy, the report recommends that farmers be required to boost their self-respect (*swabhiman*) and

self-reliance (*swavalambam*). Ironically, its recommendations for achieving this include changes in the Karnataka Land Reforms Act to allow larger land holdings and leasing. Such steps would further decimate the land worked by small farmers who have been protected by land 'ceilings' (an upper limit on land ownership) and policies that allow only peasants and agriculturalists to own agricultural land. (This is part of the 'land to the tiller' policies of the Devraj Urs government).

This report supported the government in its desperate attempt to delink farm suicides from economic processes linked to corporate globalisation. These processes include both the rise in indebtedness and increased frequency of crop failure due to higher ecological vulnerability arising from climate change and drought, and higher economic risks due to the introduction of untested, unadapted seeds grown as monocultures.

However, farmers' suicides cannot be delinked from indebtedness and the economic distress small farmers are facing. Of course indebtedness is not new and farmers have always organised for freedom from debt. In the 19th century the so-called 'Deccan Riots' were farmers' protests against the debt trap into which they had been pushed to supply cheap cotton to the textile mills in Britain. In the 1980s they formed peasant organisations to fight for relief from public debt linked to Green Revolution inputs. However, under globalisation, farmers are losing their social, cultural and economic identity as producers. Farmers are now 'consumers' of costly seeds and costly chemicals sold by powerful global corporations through powerful landlords and money lenders locally. This combination is leading to corporate feudalism, the most inhumane, brutal and exploitative convergence of global corporate capitalism and local feudalism, in the face of which farmers, as individual victims, feel helpless. The bureaucratic and technocratic systems of the state are coming to the rescue of the dominant economic interests by blaming the victim.

It is necessary to stop this war against small farmers. It is necessary to re-write the rules of trade in agriculture. It is necessary to change our paradigms of food production. Feeding humanity will not be possible with the extinction of farmers and of species. Another agriculture is possible and necessary – an agriculture that protects farmers' livelihoods, the earth and its biodiversity, and public health.

From the suicide economy to living economies

Gandhi's creative vision of *swadeshi* (self-reliance), *swaraj* (self-rule), *satyagraha* (struggle for truth – the basis of civil disobedience) and *sarvodaya* (upliftment of all) inspires us to build living economies and living democracies. In his legacy we find hope, we find freedom, we find our own creativity. Gandhi's philosophy is a living philosophy because when it informs our actions, they become charged with life. Through Gandhi we can begin with constructive action and turn it into our best resistance. Our seed-saving is a resistance to seed monopolies and seed patents. And when our government begins to implement TRIPs as it has done through three amendments of our Patent Act and the creation of new legislation on plant varieties, we remember Gandhi's words: 'As long as the superstition that people should obey unjust laws exists, so long will

slavery exist'. And we renew our commitment to the *Bija Satyagraha* ('struggle for the seed'). Just as Mahatma Gandhi started the Salt *Satyagraha* to protest against the colonisation of salt by the British Empire through the imposition of the Salt Laws, so are people's movements in India today committed to the *Bija Satyagraha* based on non-cooperation with unjust and immoral Intellectual Property Rights (IPR) laws being imposed by transnational corporations (TNCs) and the rich countries. These laws include:

- ❖ The protection of plant varieties and farmers' rights act, which establishes TNCs' monopoly over seeds, makes Indian farmers bio-serfs and robs them of their age-old freedoms to save, exchange and sell seeds.
- ❖ The amended patent act, which allows seeds, plants, animals, genes and all life forms to be patented and indigenous knowledge to be pirated.
- ❖ The biodiversity act which gives free access to our genetic wealth and indigenous knowledge to biopirates within and outside India.

In response to genetic pollution that threatens the integrity of our biodiversity and globalisation that threatens our farmers, we are creating living economies and living democracies based on *swadeshi* and *swaraj*. Just as the seed has the potential to germinate and evolve and renew itself perennially, Gandhi's legacy has the potential to germinate, evolve, and renew our actions and strategies for freedom appropriate to our times and context.

From the seed, our *swadeshi* efforts have spread to organic farming, *jaiw kheti*, and fair and just trade. *Swadeshi* in the form of biodiversity conservation has evolved organically into the *swaraj* of *Jaiw Panchayat*, living democracy, resting on the resistance of *satyagraha* – non-cooperation with immoral, unjust laws that force patenting of life.

Gandhi's legacy lives on, and gives us hope to shape ever-new instruments to keep life, in all its diversity and integrity, free. Gandhi's legacy carries the seeds for the freedom of humans and all species. Gandhi's legacy is humanity's hope.

Living Democracy Movement

Twentieth century revolutions for social justice and people's freedom were largely based on a Cartesian view of the world and of social transformation. Even the metaphors used are Cartesian: 'What is your position on...?' or 'What line should we take?' 'Positions' and 'lines' lead inevitably to arguments, conflicts and divisions. An example is the deadlock among those who are part of the anti-globalisation, anti-WTO movement: they are getting stuck in their 'positions' on WTO and agriculture. Positions demand rigidity, fixity, whereas the contexts in which we find ourselves demand fluidity and flexibility.

The quantum view of the world has allowed us to transcend deterministic positions, to make transitions into the indeterminate. It has allowed us to accept uncertainty and non-separability. It has allowed us to think in terms of fields and spaces, not 'positions' and 'lines'. When even physics has given up on the false certainties of the mechanistic worldview, surely our engagements for

sustainability and social justice should also move beyond the rigidities of mechanically perceived and articulated ideologies?

The success of movements at Seattle and Cancun, the amazing mobilisation for the World Social Forum, are examples of an emergent politics – a politics based on diversity and self-organisation rather than monocultures and manipulation. That it has worked on both local and global levels is indicative of the potential of self-organisation as a basis of transformation politics at all levels.

The violence of corporate globalisation on the one hand and wars justified on grounds of shallow religious and narrow nationalist identities on the other demands a response that is simultaneously local and universal. It needs to be local in terms of production, both to reduce our ecological footprint and to create more livelihood and job opportunities; local, too, in terms of our diverse identities, rooted in biological and cultural diversity, in our sense of place and our sense of belonging. It must be universal because we share life with the rest of life, and humanity with all of humanity.

The dominant form of corporate globalisation takes a narrow, highly localised interest and imposes it as ‘global’, as ‘universal’. The imposition involves deep structural violence, but it also creates vicious cycles of violence as identities are threatened, securities eroded, and a backlash emerges in the form of ‘terrorism’. The universal cannot be a globally imposed local interest. It is the emergent quality of all people living by the universal principles of non-violence – non-violence to non-human life as ecological sustainability and non-violence to human life as social and economic justice. The universal is the unfolding of the potential of diverse and multiple locals, acting in self-organised ways but guided by the common principles of love and reverence for life. As Tolstoy wrote from his deathbed, it is:

... understanding that welfare for human beings lies only in their unity, and that unity cannot be attained by violence. Unity can only be reached when each person, not thinking about unity, thinks only about fulfilling the laws of life. Only this supreme law of love, alike for all humans, unifies humanity.

One of the legacies of the Cartesian mechanistic worldview is its totalitarianism. On the one hand, this allows the violent imposition of ones ‘position’ on others, with the conviction that this is for the good of the other. The Iraq war is supposed to have been good for the Iraqis. On the other hand, the totalitarianism of mechanistic universal impositions makes ordinary people hesitate to take the initiative for change because in a mechanically defined unity, it is either all or nothing.

As Gandhi observed:

It is necessary for us to emphasise the fact that no one need wait for anyone else in order to adopt a right course. People generally hesitate

to make a beginning, if they feel that the objective cannot be had in its entirety. Such an attitude of mind is in reality a bar to progress.⁴

The Living Democracy movement (*Jaiv Panchayat*) is based on the acknowledgement that we can begin where we are, and we can imbue our everyday actions with the broadest of visions and the deepest of values. It embraces the principles of Earth Democracy – that we are members of the earth family, that our deepest identity is our earth identity and our highest duty is to protect all life on earth.

??Declaration of Jaiv Panchayat – The living democracy movement

The work of Maharishi Jagdamni Rishi Atri, Mata Anusuiya and other saints has contributed to the conservation and sustainable use of all kinds of medicinal plants and floral wealth and other precious biodiversity of these mountains. The research was further enriched by Maharishi Charak and other saints and health practitioners who compiled the volumes of Sanhita and Nighantu detailing the uses and properties of our biological resources. These volumes were bestowed to the community for well-being and continue to live through the Ayurveda.

From our forefathers we have inherited the right to protect the biodiversity of our Himalayan region and also the corresponding duty to utilise these biological resources for the good of all people. Therefore we pledge, by way of this declaration, that we shall not let any destructive elements unjustly exploit and monopolise these precious resources through illegal means. So that in our communities and country we can truly establish a living people's democracy wherein each and every individual can associate herself with the conservation, sustainable and just use of these biological resources in her/his everyday practical living. This tradition of sharing shall be kept alive through the Jaiv Panchayat – the living democracy. The Jaiv Panchayat will decide on all matters pertaining to biodiversity. Through such decentralised democratic decision-making we will make real the democracy for life.

Cows, buffaloes, goats, sheep, lions, tigers and in fact all animals, birds, plants, trees, precious medicinal plants and manure, water, soil, seeds are all our biological resources and we shall not let any outsider exercise any control over them through patents or destroy them through genetic engineering.

As a community, we shall together be the guardians of our biological heritage.

From 9 August 1999 onwards hundreds of village communities, organised as Jaiv Panchayats, served notices to the Director General of WTO, Mike Moore, as part of their campaign against biopiracy. The text of the letter is reproduced below.

*Mr. Mike Moore
Director General
World Trade Organisation
Centre William Rappard*

9th August 1999

⁴ M. K. Gandhi, 'Equal Distribution', *Harijan*, 25 August 1940.

*Rue de Lausanne 154
Case postale
CH - 1211 Geneve 21*

Dear Mr. Moore,

Sub: BIOPIRACY AND WTO

India is a country which has centuries' old indigenous knowledge systems based on its rich biodiversity which the Indian people have conserved through their traditional lifestyles and local economies. Two-thirds of our population even today is directly dependent on the biological resources and the indigenous knowledge. These resources and knowledge are used in an ethic of sharing so that the livelihoods and needs of the poorest are met. This is in direct contradiction with the ethics (or the lack of it) perpetrated by the World Trade Organisation through the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPs). TRIPs has globalised and legalised a perverse and unethical intellectual property rights system, which encourages the piracy of our indigenous knowledge and subverts our decentralised democratic system.

India and its laws recognise the jurisdiction of local communities over the biodiversity in their area. As per the amendment in the Constitution of India, inserted by the Constitution (seventy-third Amendment) Act, 1992, the Panchayati Raj system for decentralised democracy for the rural areas has been reinforced. As per a further Amendment in 1996 the Gram Sabha (the village community) is the highest competent authority to take decisions on natural resources at the grassroots' level. Our national government has also reiterated this by declaring the year 1999-2000 as the 'Year of the Gram Sabha'. The jurisdiction of the Gram Sabha on the biodiversity and the biodiversity-related knowledge are inalienable.

The Convention on Biological Diversity (CBD) also recognises the sovereign rights of the local communities. India has ratified CBD and endeavours to provide for the sovereign rights recognised therein. These rights over biodiversity and biodiversity-related knowledge are inalienable.

However, it is brought to your notice that these rights are infringed by the law and policy perpetrated by the WTO, especially the TRIPs. TRIPs is infringing on the Common Property Rights (CPRs) to biodiversity and biodiversity-related knowledge by recognising only the private property rights that are enshrined in the culturally biased system of the Western industrialised states. TRIPs is enabling biopiracy. We enclose a short list of biopirates and how they have wrongfully claimed to have invented and created knowledge that has been part of our culture and economy for centuries.

We wish to inform you that we will not allow you to take decisions on matters that fall exclusively within our jurisdiction through our decentralised democratic system. On the basis of our inalienable rights that are recognised by our Constitution and the CBD, we will not permit WTO to undermine our rights and protect those who steal our knowledge and our biodiversity.

According to the mandate of the WTO, TRIPs is to be reviewed this year. We ask you to immediately amend TRIPs and exclude biodiversity from your global IPR regime

acknowledging our local rights to make laws and determine ownership and use patterns and to settle disputes.

As the competent authority, members of the following Gram Sabhas, we expect you to report to us on:

- a) steps you are taking to amend the TRIPs*
- b) what you are doing to appropriately revamp the DSM_(Dispute Settlement Mechanism)*

In particular we ask for the dispute of US-India to be reopened taking democratic decentralised rights into account. In any case we will be carrying out local public hearings to resolve these issues in our way at our level.

Mike Moore came to India in response. And the Government of India had to acknowledge the problem of imposing TRIPs on local communities in its submission to the WTO related to the review of TRIPs.

Following this we mobilised local action to respond to the undemocratic imposition of genetically modified organisms (GMOs) through the WTO. The citizens' GMO challenge is a global response of local and national citizens' movements of the US- initiated WTO dispute against Europe on GMOs.

However, on 26 December 2004 (the day of the Tsunami), the government passed a Patent Ordinance to implement TRIPs. Movements are challenging it and have declared their non-cooperation with seed patenting. On 2 March, 2005, I accompanied a delegation of farmers' organisations to meet the prime minister, Man Mohan Singh, to submit our declaration of non-cooperation, and our commitment to save and exchange seeds.

The living democracy movement is based on a local–global, micro–macro symbiosis. Participation in the Laws of Life Conference at the global level in 1987 gave me the knowledge and inspiration to start Navdanya. The global movements to resist TRIPs, and GMOs would not have emerged in the form they did without the new possibilities and potentials opened up by Navdanya's and other local groups' action on the ground. This provided valuable knowledge concerning the ways in which ecological farming methods and indigenous crops are superior to genetically engineered products like the golden rice and protein potatoes, as well as how the sharing of knowledge, seeds and biodiversity is a superior culture to the culture of enclosures. Our work on the articulation and defence of biodiversity and knowledge as a living commons through common intellectual rights, community seed banks and *Jaiiv Panchayats*, has created alternatives, not just for local communities, but for all societies. We refuse to allow an enclosure of our last freedoms. And our resistance has opened up spaces in different spheres and different places for others.

Bija vidyapeeth: Education for earth citizenship

The events of 9/11 were a product of hate. The response to 9/11 was the globalisation of a culture of hatred and fear. We need to keep other cultures alive. We need to keep the culture of love and compassion and sharing alive.

That is why, in 2002, we started *Bija Vidyapeeth* – the school of the seed – on the Navdanya Farm. Satish Kumar, the founder of the Green College (Schumacher College) in the UK, had, for some years, been urging us to start a sister institute; 9/11 became the compulsion. It was inaugurated by Mohd Idris, the founder of Third World Network, Edward Goldsmith, the founder editor of the *Ecologist* and Sulah Swareksha, a Buddhist scholar/activist from Thailand.

The name, the School of the Seed, is appropriate both to its place and concept. It is located at our community seed and biodiversity conservation farm. The perennial potential of seed to renew itself is the inspiration for our education for earth democracy and earth citizenship. The participants come from across the world and they learn universal principles through the specificity of biodiversity, the soil, the water and the people of the Navdanya farm in Doon Valley.

Not only is there a global/local convergence. There is also a convergence of reflection and action, of intellectual growth and physical work – cooking, cleaning and farming. What *Bija Vidyapeeth* teaches is love and reverence for all life and respect and involvement in all aspects of human activity. It teaches reciprocity and mutuality, and participation, not just in intellectual exploration but in the work that maintains and sustains life. This includes work that has been considered ‘menial’ – the work of the peasants, of workers, of women. So much of human progress has been designed as escape from the physical work of sustenance and service. Yet this ‘escape’ is at the root of human alienation and exploitation, the non-sustainable use of the earth’s resources, and the human health problems resulting from our working against our species’ nature and our needs for connection and meaning.

Human identity has become so fragmented and narrow. So often it is defined in terms of professions, religions and nationalities – labels that separate us from ourselves, each other and the earth. *Bija* is education for our full human identity – as an earth identity – and our commonality with other humans. We are all dependent on the same soil, the same water, the same biodiversity. But our earth identity is not just about our being a member of the human species. We are members of the Earth Family – of life in all its diversity. All beings are related to us – they are our kin. Our fate is their fate; their fate is our fate. These lessons for earth citizenship are only partly learned intellectually through the best minds of our times. They are also learned experientially through participation in the life of earthworms and butterflies, through the amazing wonder of 600 crop varieties growing in partnership and harmony rather than conflict and competition. *Bija* is lived experience that teaches that cooperation, not conflict, is human nature.

Embodied learning is learning through the body, learning from the earth, opening up to learning in all the dimensions, all the processes that have been shut out in a Cartesian world of separation, division, objectification and a commodified world in which nothing has value outside the market.

Learning from nature and biodiversity about earth citizenship is based on engagement in practices that embody ecological values – connection, openness, generosity, appreciation, partnership, enquiry, dialogue, celebration,

conservation, protection. This practice-based learning has been devalued but it is essential to our survival.

In the words of Fritjof Capra, ‘The process of knowing is the process of life..... The organising activity of living systems, at all levels of life, is mental activity’.⁵ Consciousness provides the ‘frames’ or mental structures through which we interpret our world, understand ourselves, find meaning. Enclosures of the mind, our thoughts and our consciousness are inner enclosures, just as enclosures of the commons – of the land and pastures, of rivers and biodiversity – are external enclosures.

Education has increasingly shrunk our learning, by shrinking the frames of our consciousness. Education as conventionally understood is the dissemination of knowledge that has been generated through formal research. The learner is an empty mind – Locke’s ‘tabula rasa’ – and education is a way of ‘filling’ the emptiness. *Bija* replaces this with an ecological approach to education. All minds are full of preconceived assumptions. Education is a transformation of this consciousness through practice. This change is necessary not only because the mechanistic metaphors of knowledge, education and organising are less and less effective in addressing issues of our times but also because they are in fact feeding and fuelling vicious cycles of violence and alienation.

When the self is perceived as being at war with nature and society, rather than part of nature and society, alienation and violence become ‘natural’ to being. Peace and recovery of our ecological selves requires that we re-embed ourselves in the web of life and the web of social relationships. This re-embedding is *Bija*’s invitation to learning for an ecological consciousness and education for earth citizenship.

⁵ Capra, F., *The Hidden Connections: Integrating the Biological, Cognitive, and Social Dimensions of Life into a Science of Sustainability*, Doubleday, New York, 2002.