

Towards a Green Society

Jyotirmay Goswami

Economists must redefine poverty as a shortage of biomass rather than a shortage of cash. Gross natural product is more relevant to the poor than gross national product.

Anil Agarwal, environmentalist.

Emancipation from the bondage of soil is no freedom for the tree.

Rabindranath Tagore.

When I was a child, I came to know from my father that the sun is the original source of energy in the world. Among all living beings, only the plants have the capability to trap that energy. My father's love for trees was inspiring. While in school, I learnt about the process of photosynthesis. It was amazing to imagine that plants, the only masters of this process, transform this energy into wealth for all living creatures and distribute it indiscriminately.

Natural wealth has counted as an indispensable asset in almost all cultures through centuries. In the last few centuries however, wealth of a different kind has gained prominence. Instead of relying on gross natural products, nation-states have been singularly occupied with the gross national product. The effects of this single-minded pursuit are there for all to see. The matters of widespread environmental degradation, extinction of biological species at an unprecedented rate, climate change and global warming have now become common knowledge. We have come to know that the rapid strides of apparent human progress made since the industrial revolution have come at a terrible cost. In India, the upbeat spirit of the green revolution has given way to the sobering realization that indiscriminate use of chemical fertilizers, pesticides, groundwater and special varieties of seeds create a dangerous imbalance in the natural world which, if the present trend continues, would become uninhabitable for future generations. At the same time, our quest for efficiency through automation has led to centralized control of resources, inequality and disruption of livelihoods of a large section of the population. People all over the world are becoming surplus everyday. Life in the villages is becoming less and less viable due to intrusion of distant economic forces. This has resulted in steady migration of people from villages to towns and from towns to cities, where one has to fall in line with the prevailing culture. Just as agriculture has been taken over by a single, resource intensive mode, the space for diverse cultures is set to be taken over by a single, resource intensive culture promoted by advertising and mass media.

Expulsion of man from his natural and cultural context has meant deprivation from his sources of spiritual sustenance which cannot be compensated by material possessions. Human relations have come to be polluted by the compulsion to judge everything against an impersonal, utilitarian standard. When the scale of this disarray is considered together with the disarray in the natural world, it becomes amply clear that the path currently traversed by mankind is not sustainable. One has to look for a better way of life.

Return to natural ways of agriculture appears to be inevitable. However, the transformations of the last few decades have meant that such a switch would result in a swift decline in productivity and income in the short term. Even though the long-term outlook is better, the prospect of short-term loss prevents people from taking to natural farming. The transition can be made possible by diverse farming. By resorting to various supplementary plants and crops, it is possible to augment the income a bit. However, the issue of security can be overwhelming in the short term. Any departure from conventional wisdom would attract suspicious attention. Any possibility of success of an experimental path would generate neighbours' envy. Many experiments have to be abandoned because of sabotage.

These hurdles are natural consequences of a piecemeal approach which has been our bane. We would not have been in the present mess if we had realized how interconnected human life is with the lives of other humans and the natural world. Every effort to get out of this mess has to be part of a holistic approach.

The present article is about a proposal to reclaim our lost greenery in a way that might strengthen village life and complement natural and diverse farming. The basic idea is to extend the system of share-cropping currently existing between land-owners and landless labourers, to mid- and long-term cultivation of diverse nature. The centre-piece of this proposal is shared greenery for all and full societal participation. In economic terms, this proposal brings current needs and deficiencies together with unutilized or underutilized resources, so that one can expect a decent livelihood in the local community, without having to depend on the outside world for essential items. However, the essence of this proposal lies in the approach, and not in the balance sheet. One has to try and work on the root of the present problems, that is, to embrace a sustainable and healthy way of life. The proposed greening initiative can easily combine with other initiatives compatible with this basic goal.

Greenery in India – history and present status

Forests in India have traditionally been common property. Local people were de facto owners of the forests. The economic benefit reaped by them were far more than that accruing to the local king. The present status of forests as exclusive state property goes back to the British era. As a matter of fact, much of today's forest policy that has resulted in timber-intensive, fruit-free reserved forests is the legacy of the pre-independence period. A comprehensive Memorandum of the Government of India brought out by the then Governor Lord Dalhousie on 3rd August 1855 – a document which has since been dubbed as the Charter of Indian Forestry – clearly proclaimed forests as state property, so that the public cannot come in the way of logging for railway sleepers.¹ The *Indian Forestry Act* (1865) gave the government full

control over felling of trees in forests. The first *National Forest Policy* adopted in 1894 sought to demarcate and reserve forests in the interest of the state.¹ The National Forest Policy of independent India declared in 1952 turned out to be only a variant of the 1894 policy.² Clause 7 of this policy detailing 'claims of neighbouring communities', denied forest dwellers the right to gather forest produce, in the name of national needs (which included 'sustained supply of timber and other forest produce required for defence, communications and industry' and 'realization of maximum annual revenue in perpetuity'). Since then, the local people have consistently been perceived as a nuisance as far as forests are concerned. This perception continued even when resource utilization came to be supplemented by forest conservation in *sarkari* policy. This mindset is apparent from the remark made by the National Commission on Agriculture (1976), "The rural people have not contributed much towards maintenance or regeneration of forests. Having over-exploited the resources they cannot in all fairness expect that somebody else will take the trouble of providing them with produce free of charge."³

It is clear that the attitude of the local dwellers was seen by the Commission as a cause of the problem rather than as a natural effect of government policy. Such a confusion is bound to occur when analysis is made without a sense of history. Before the government turned to wholesale exploitation of forest resources, it was the local people who had protected the forests. Local communities intended to remain where they were for centuries. They had to ensure sustained liveability of their surrounding area. Conservation of forests *had to* be imbibed in their way of life. The tribal peoples' tradition of festivals, their yearly ritual of tree-planting – all these were aspects of an natural relation they had with the forest. Government policy has put increasing pressure on this relation over the years.

Despite the lack of sensitivity in government policy, there had been some individual initiatives to involve local people in the affair of forests. In 1971, Dr. Ajit Bandyopadhyay started a project on Socio-Economic Forestry in the village Arabari in Medinipur district of West Bengal. In this model, local people were engaged in guarding government-owned forest in exchange for economic benefits in the form of limited use of forest products. The economic incentive benefited those who were engaged in this manner, while the limited objective of protecting the forest was also met. This model came to be followed in several states, with notable success in West Bengal and Madhya Pradesh.

The gains from such initiatives have, at best, been sporadic and restricted to small areas. The case of Burdwan district of West Bengal is a good example. According to the Science Journal of Burdwan University (1986), reserved and protected forests accounted for 1.3% of all land area in this district in 1944-45, while the total amount of greenery – excluding short-term farmland – was 29.4%.⁴ Clearly, most of the greenery was *outside* areas officially designated as green. By 1982-83, the reserved and protected forests grew to 4.4% of land area, but the total greenery fell to 16.9%. The main 'beneficiaries' of this alarming reduction have been farmland, to which 7.1% land was added during this period (bringing total farmland to 69.8%) and residential/office/factory area, to which 4.1% land was added. The rest of the decline is due to loss of greenery from unused and miscellaneous plots of land such as the edges of water bodies, roads and by-lanes. The latter category of lands holds huge potential for recovery of greenery, as we shall see later.

In any case, 'success' of experiments like Arabari had an impact on the second National Forest Policy of India (1988), which called for joint management of forests.⁵ It was the first time in independent India that the role and interest of dwellers of the forest and adjoining areas were incorporated in official policy. The new policy mentioned three types of forests: reserved forest, protected forest and village forest. The third category consists of small and scattered plots of community owned forest. In spite of extensive planning and expenditure for these three categories of forests, the amount of greenery remains inadequate. According to the Forest Survey of India, greenery accounted for 19.49% of all land in India, and 9% in West Bengal in 1991. By 1997 the percentage in India fell to 19.27 and that in West Bengal increased to 9.41.⁶ The figure given by the government of West Bengal is 19.98% - bolstered perhaps by inclusion of bushes, sugarcane plantations and anything else that looks green. In any case, these percentages are much less than the estimated 40% a century ago⁷ or even the desirable level of 33% envisaged in the National Forest Policy 1988.⁵

Village forests account for most of the loss of greenery. There have been some official effort to reclaim greenery outside reserved or protected areas, with the aim of increasing the supply of timber and firewood so that there is less pressure on protected and reserved forests and some revenue to the panchayats. These schemes for 'social forestry' have succeeded in meeting these objectives to some extent. However, production of timber and firewood can hardly be called *forestry*. 'Social forestry' has never been a *social* phenomenon either. The local panchayat and the handful of guards are benefited financially, but the rest of the society has absolutely no role in the matter.

A government initiative would always have its limitations because of its scale and mode of operation. If need-based involvement of a few local individuals in a government initiative have brought about positive changes, natural involvement of the society at large in local initiatives holds the potential for much more.

Sustainability in agriculture – the road traversed

Agriculture has been the basis of Indian society for thousands of years. Naturally the tools and techniques used here have evolved over a long period of time. David Hopper describes the agricultural practices in an Indian village – Senapore – in the mid-1950s:⁸ "The age-old techniques have been refined and sharpened by countless years of experience, and each generation seem to have had its experimenters who added a bit here and changed a practice there and thus improved the community lore. ... In general each man comes close to doing the best he can with his knowledge and cultural background."

This rate of output which appeared optimal to Hopper was also a sustainable one. In a 1986 article in *Lokayan Bulletin*, Vandana Shiva quotes⁹ a British era director of agriculture in the erstwhile United Province as saying in his presidential address given to the Indian Science Congress, "We need not concern ourselves with soil deterioration in these provinces. The present standard of fertility can be maintained indefinitely."

The agricultural methods employed in those days are not just a reflection of traditional wisdom. These reflect common sense too. Successive generations of local population had to be sustained on local produce – given the relatively closed nature of rural society in India at that time. For centuries, both the size of a community and its agricultural practices had to be in steady equilibrium with natural limits. The expansion of communication and large scale economic activities since the nineteenth century led to migration of an ever-increasing portion of the population out of their native places. The population began to grow, along with explosion of its needs. By the first few years of independence the total production of food-grains were woefully inadequate for the large and rapidly growing population.

Instead of checking the unsustainable rate of population growth, the five year plans brought about policies that would enhance migration on one hand and rapidly increase food production on the other. Perhaps it was hoped that food production, with the help of new methods, would finally overtake the needs of an ever-increasing population. Nobody thought of sustainability at that time.

The Green Revolution was born. Heavy tractors dug out soil from hitherto unreachable depths. Pesticides and fertilizers were used in liberal measures. Groundwater flew out of pumps where irrigation canals could not reach. High yielding varieties of seeds were introduced. Crop yield increased steadily. India became 'self-sufficient' in food grains.

The ill-effects of the revolutionary agricultural methods have begun to surface after a few decades. Production cost has risen steadily while crop price has reduced in real terms in an increasingly global market. There has been erosion and loss of fertility of soil. The groundwater level has sunk to record depths in various parts of the country. Use of only a few high-yielding varieties of seeds has made extinct numerous traditional varieties which were suitable to diverse local conditions. According to scientist Debal Deb, about 5,600 varieties of rice had flourished in Bengal alone before 1970; but only 500 may be left now.¹⁰ Many tricks of the trade that optimally utilized local resources have also gone extinct. Compulsions of a competitive market have shifted the focus from sustainability to short-term survival. Many farmers who were unable to survive have sold their land and migrated elsewhere to become wage-earners. According to 1991 and 2001 census reports, close to 750 thousand farmers – a third of the total number of farmers and a tenth of the total workforce – have left their profession in two decades in West Bengal alone.¹¹ Change of agricultural technology has also forced many craftsmen to give up their profession. Expansion of the marketplace for agricultural produce has forced many shopkeepers, traders and middlemen to go out of business. The hubs of new economic activity – including industries – have been unable to absorb the swelling number of unemployed persons.

The shifting demands of an uncertain market have thrown farmers into perennial confusion regarding what to grow. Every year there is surplus production of some crops and shortage of others. There was 2.6 million tons of surplus in rice production in West Bengal alone in 2002-03, while there was shortage of pulses and oil-seeds. This state currently produces only half of the wheat it consumes, one-third of oil-seeds and one-seventh of pulses.

There are some more subtle effects of the new mode of agricultural production. Traditional agriculture in West Bengal had permitted growing of some varieties of fish in the field itself during the wet season. Chicken, ducks, goats, pigs and cattle could thrive around the field. Use of fertilizers and pesticides have made these supplementary activities impossible. Vegetables and fruit trees grown on the fringes of plough-fields have also disappeared to a large extent. The common man's diet has much less variety now.

The modes of production of fish have also undergone a sea change. Instead of the wide variety of fish that used to grow in ponds, wayside pools and even in farmland for some months during the year, we now have just a few commercially lucrative varieties grown in large water bodies owned by a relatively small group of people. This cultivation is also made with the help of chemicals to ensure large size of the fish and to ward off parasites. As a result, markets are dominated by a few varieties of fish transported from a long distance. Diverse kinds of fresh and local fish such as *koi*, *magur*, *shingi*, *shole*, *latha*, *puti*, *mourola*, *pakal* etc. have disappeared from the diet. A large part of the populace can no longer afford to buy fish regularly.

Even a few decades ago people were not particularly aware of the commercial value of the diverse vegetables, fruits and fish that grew everywhere. Propriety of the land was not a serious issue in these matters, and some of the land was common anyway. Anyone in the locality – including the poor – had some access to these items. Conversely, it is the poor who have suffered most from the loss of diversity, as they cannot afford the alternatives that exist today.

The ills of the so-called modern methods have now become so obvious that search for alternative methods has become imperative. Widespread food and water shortage would occur rather soon if the present trend continues. There are a few – including the scientist-president of India – who still hope that fresh scientific miracles would postpone the inevitable. They pin their hopes on biotechnology. As is the case with all revolutionary technologies, we get to learn about the benefits first, while the ill effects trickle through over the years. In the case of biotechnology though, even the layman knows that it will further accumulate key resources in the hands of the already powerful, and everyone else will have to pay the price. There is no reason why the 'second green revolution' will not further compound the ill-effects as the first one.

Barring a handful of day-dreamers and advocates of big business, there is a general consensus that we must bring back sustainability – both in the matter of population growth and agricultural methods – if imminent shortages are to be avoided. As far as agriculture is concerned, the only sustainable alternative known to mankind is natural farming. The trouble is, the soil has been rendered so devoid of natural nutrients and we have grown so used to unsustainably high yields that an overnight switch to natural farming would spell disaster. The steady reduction of yield and loss of soil fertility in recent years have begun to lower our inflated expectations to realistic levels. Even so, the soil would take a few years to be fit for optimum yield through natural methods. Farmers who survive on marginal profit cannot afford this interim period of low return. A supplemental income – in cash or kind – is desperately needed.

This is where diversity in agriculture comes in. If the practice of growing various types of diet supplements in suitable plots of land can be brought back, then it can compensate for the temporary fall in income resulting from the switch to natural farming. This is easier said than done. One has to learn afresh the skills of tending to different aspects of farming, on a continuous basis. It will be a while before these skills become second nature once again. A great deal of courage is needed to take the plunge.

Shripad A. Dabholkar has shown that, through diverse farming in areas that receive 30 centimetres of annual rainfall, one can generate an annual income of two to five thousand rupees (by 1998 standard) per 1000 square feet of land.¹² Judicious use and reuse of water and other resources can allow a family of five to lead a life of plenty over just ten thousand square feet of land. However, these calculations do not include the issue of security. With a huge part of the population feeling left out of the process and sustaining themselves only barely, diverse and natural farming would be vulnerable to theft or sabotage. Sectarian sentiment is also a threat. An even greater impediment is perhaps the lack of optimism. The series of disillusionments experienced by the common man has made it difficult for him to believe that any good can come out of yet another experiment.

Outline of the greening initiative

In summary, the present situation is paradoxical in many ways. Government schemes for social forestry can neither include nor benefit the society as a whole. Greenery is vital for healthy physique and graceful spirit of the society, but apparently there is not much land left for this to happen. Almost everyone accepts the wisdom of switching to natural farming for long term sustainability, but there are many short term hurdles. There is need for diversification in agriculture on one hand, and shrinkage of seed variety in the market on the other. Human labour is crucial to natural farming and the security of farmland. We have no shortage of people, but this abundance is perceived more as a security threat than as a resource.

It would be ideal if these pluses and minuses can be aligned in a complementary way. The present proposal is intended to do just that.

The idea, in a nutshell, is that the whole society would participate in an intensive greening effort from which everyone would be benefited directly. The fact is that even today there is plenty of unutilized land here and there where one can grow fruit trees, vegetables and other plants of economic value. These trees would be owned individually. Every person – even the landless – would own at least forty trees and get at least ten kilograms of fish a year. Those who own large plots of land would keep the land but allow others to share a portion of the products from the trees – in exchange for labour and security. The existing formula for splitting profits from short-term share-cropping can be used. Initiative for the collective effort would be taken by a representative body – a club. The club would engage a few individuals for ensuring security. Additional security would come from the fact that everyone has a stake in the collective effort. The income from the trees would serve as a supplement for those who wish to revert to natural farming. Increased supply of local fruits and vegetables would improve the nutritional value of everyone's diet.

Local exchanges of produce would make the local economy more resilient against fluctuations in the global market.

The club

The club would play a pivotal role in harmonizing everyone's expectations and endeavour in the greening initiative. It would facilitate circulation of seeds and know-how, encourage local experiments on diverse agriculture, and bring together potential recipients and providers of security.

Because of the simple reason that the effort is a social initiative and not a state scheme, it is important that the club has a distinct identity from the local arm of the government. It may be called a green club, soldiers for greenery, friends of the tree or culture club, or may bear the name of local or national personalities. Everyone in a neighbourhood would be an ordinary member of the club. Everyone will have to pay a membership fee, which may be contributed in the form of labour, land and/or other resources. There can be several clubs in a village, each having 500-1000 members and looking after about 40,000 trees.

There would be a *samsad* of 20-30 persons who would run the affairs of the club. Education, intellect or ability to perform should not be the criterion for judging who would be suitable for membership of the *Samsad*. The club is meant to be like a larger family, and so those with an extended heart would be most suitable members of the *samsad*. In every neighbourhood there are people who habitually turn any need-based transaction into a celebration of human relation. These are the people who can extend the boundaries of a family, and the right people to run the *samsad*. It is not necessary that the club functions at the highest possible efficiency in terms of input and quantifiable output. Development of human relations is vital to the idea of the club, and those who can bring this about would make it a success.

The members of the *samsad* would be selected through consensus. The work of the club does not centre around a magic formula or top-down know-how. It is based on folk wisdom that has accumulated and will continue to accumulate over centuries. It is also meant to be an expression of a way of life that does not exclude anyone. This is why it is all the more important that consensus should be the only mode of selecting members of the *samsad*. In the usual process of selection, what passes as opinion of the many is often the opinion of only a few. Others are compelled to go along with this view for various reasons. What matters in this process is the ultimate outcome. Such a mechanical process is deemed adequate for organizations driven by compulsions of the balance sheet. However, a natural entity like a family cannot thrive with such a process. A member of a family may be entrusted with some work only with wholehearted and sincere support from others. If the club has to become an extended family, this has to be the only acceptable form of representation. Raising a sapling like one raises a youngster, apportioning the fruits of labour, responding gracefully to difficult needs – these tasks call for a spotless system of coordination. If there is even a trace of doubt about a member of *samsad* on the part of any general member, then the club cannot plunge into action without regaining everyone's trust. The sincere effort to allay all fears and to carry everyone along would usher in collective goodwill and high spirit which is essential

for the kind of transformation envisaged here. A leader of the *samsad* has to emerge through consensus. If this process takes time, so be it. The process can bring out numerous leading potentials. The eventual leader would be a focal point of all these potential leaders. The leader, bestowed with the aura of collective will, shall be inspired to be equal to the great task that he is ordained for. Others will not just be passive followers, rather they will see the leader's considered initiatives as a manifestation of their own initiatives.

In many ways, the concept of the club may appear to be that of a cooperative society. Its main difference with the usual cooperative societies is that it would put means before the end. The club would not work mechanically towards achieving a certain target. Its emphasis would be on rebuilding human relations.

Security

Lack of security is the main reason why many people cannot grow fish in the pond, plant fruit trees or go for diverse cultivation. The need for security in the greening initiative is so great that security through police protection is impossible. One cannot afford to deal with the security issue as an isolated one. General Zia-ul-Haque of Pakistan had taken the initiative of reining in all goats and lambs as they had become detrimental to agriculture. The drive became a spectacular failure, as it had pitted one section of the society against another under government sponsorship. The military approach to security may be effective in dealing with fringe cases, but overall security has to come from the society itself. The trust that the greening initiative does not exclude anyone and is meant to benefit everyone would provide the main layer of security. When the landless villagers become owners of trees, they would appreciate the need for overall security, and there would be numerous pairs of watchful eyes all around. In addition, about 10 security guards would be engaged by the club for round the clock vigilance, perhaps on rotational basis. This arrangement would involve minimal or no transaction of money. The guards can be chosen from those who wish to pay their membership fees in the form of services.

The greening initiative side-steps the issue of land distribution. It concerns ownership of trees – or mostly of its produces, not land. Large land owners can continue to keep their land, as long as they take their share of the responsibility. For every hundred trees planted by the landowner himself, ten have to be given to the club in exchange for security. The club, in turn, will give four to five of these to landless farmers or day labourers in exchange for service, and use the income from the remaining ones to run its own affairs. For every ten trees planted by the club in individual, collective or government land, the owner of the land can have right over four trees. The rest can be divided evenly between the club and farmers or labourers offering service.

Vigilance by those who have considerable stake in the system would be much more effective than the services of hired securitymen.

What to plant and where to plant it

The type of tree to be planted would be decided by the owner. The club may provide suggestions on this matter as well as on choosing locations. The choices would be guided by the local climate, local soil, local needs and local wisdom. We give here sketches of some possibilities which may be relevant for some areas of Bengal.

Big trees can be grown in wayside unused land, on the banks of ponds and canals and other patches of unutilized land. Smaller trees are more suitable for dividers of land plots (known in Bengal as *aal*) and small courtyards. A strip of land just inside the eastern boundary of a plot can be extensively utilized, so that there is minimal blocking of sunlight. Vegetable plants and other miscellaneous plants can be grown by the sides of hutments, on fences, and in the field - in between crop seasons.

Six out of every ten trees planted may be fruit trees. Another sizeable portion - particularly those planted by the side of the *aal* - should provide a bit of shade. If the *aal* or divider is widened a bit, then it can easily accommodate planting of fruit trees with small base such as papaya, banana, pineapple, brinjal, chili, *sajina*, *supari*, *ata*, *amla*, *amrha*, guava, *dalim*, date, *karanja*, *kul*, *kamranga*, palm, coconut, *jamrul*, *golapjam*. Small trees for timber and firewood such as *gamar*, *shishu* and *lombu*, and robust herbaceous plants such as *ol* (kohlrabi) and *kochu* can also grow here.

The first four trees of the poor day labourer, landless peasant or physically disabled have to be fruit trees. Every fifth tree may be of timber. Every eleventh - firewood. Every nineteenth may be specifically medicinal, though many plants have medicinal value. By the time the total number of trees and plants owned by an individual reaches forty, it has to be ensured that there is at least four coconut tree, four date trees, two palm trees, two large flower trees (such as *ashok*, *palash*, *bakul*, *shimul*, *jarul*, *jati*, *mather*, *kurchi*, *shiuli*, *gulancha* and *tagar*) and two cottonwood trees. Innovative ideas regarding variety of trees have to be encouraged, and specialized knowledge harnessed. Long term benefits have to be given gradually increasing priority.

Many spices grow easily in various parts of India. In addition to aniseed, fenugreek, black and white cumin, coriander, ginger, turmeric, pepper, chilli, women can grow and share local beans, gourd, pumpkin, sugarcane or lentils in between the big trees owned by them. The women who work in the field need not buy spices from the market. They can sit and chat under the shade of trees. They need not peep through the neighbour's window into her TV set and dream of possessing glamorized consumer items. They can fill their breath with fresh air laden with myriad smells and dream of a simple and sufficient future. They can bask in the confidence that their grandchildren will get virtually everything they need from the field, and look up to the market only for the occasional clove and cardamom.

Seeds

Often the scarcity of seeds happens because of our negligence. *Ata* grows naturally in Bengal. Cattle do not touch it. It used to be so common that nobody thought about it as an economic commodity. Yet, this tree has almost disappeared from the neighbourhoods. While speaking to a group of three hundred villagers in south Damodar valley in 2004, I learnt that only one of them had eaten *ata* that year. If *ata* seeds are preserved during autumn, this tree can be brought back from oblivion.

Seeds of many other fruits and vegetables can be preserved or procured easily. While visiting a friend or relative, we often taste a variety of fruit that does not grow in our neighbourhood. We can make it a point to collect seeds of such fruits. With a bit of effort from everyone, the cost of procuring seeds would come down drastically.

Preservation of all kinds of seeds has to become a part of the culture. An important contribution of a family to the club would be in the form of seeds and seedlings. Gradually the stock of seeds would exceed the requirement. When the collected seeds cannot be planted or sold to another club, the excess seeds may be placed, with regret and through an humble ceremony, in bio-fertilizer pits. Nevertheless, preservation of seeds by the householder and donation to the club should continue as a symbolic and sacred duty.

Inadequately tested magic seeds dished out by big business, including the genetically modified variety, have no place in this culture. Seed patents would be rendered irrelevant.

Autonomous greenery

It has been stated before that the greening initiative does not seek to alter existing patterns of formal ownership of land. The reason for this restraint is neither political nor strategic. Ownership is supposed to be earned at a 'fair' price. Fair price is a rather recent affair in man's journey in the natural world. There is no such thing as a fair deal in nature. Nobody earns anything. Plants cannot adequately pay for the gift of life that they receive from the sun; they can only pass it on continuously to others. The story is the same for other forms of life. The debits and credits never match. Man feels a compulsion to add a bit to this flow of wealth, knowing that he would remain indebted nevertheless. He decorates his home, plants trees and raises children. That is what makes his life worth living. That is what makes his meal tasty.

Like all plants and animals, man has all along shared land with others. If someone locks up a piece of land for his exclusive use, he not only deprives others but also himself of the fruit of that ownership. His meal does not taste good. This paradox is so obvious that further elaboration can only obscure it. Full potential of a piece of land (or fragments thereof) is not realized by the mere transfer of its exclusive ownership. This may happen by opening it up for shared use.

The land may belong to the government or to a private owner, but the fact of that ownership need not prevent its greenery from being shared or socially overseen. Just as there are multiple layers of territories used by different life forms in a forest, farmland can also be used for multiple purposes. As far as the greening initiative is

concerned, it is the society that would have central role in the pooling of resources, production and distribution – within the existing pattern of ownership and obligation. Government funding or intervention would not be necessary. In this domain, the community would have autonomy. The greenery would be autonomous.

Autonomous greenery would also be a personal matter in a special sense. Recognized (if limited) ownership of a tree or a plant can give a person context and scope to give shape to his or her idea in a creative way. The owner having a personal bond with the trees can enjoy autonomy in a small, private domain.

Initial hurdles – how to overcome them

The greening initiative signifies a collective confidence reposed on the viability of our villages. It signifies a mental switch from a passive to an active role. There are many who would like to use this occasion as a turning point and make another switch that they would have been contemplating for some time – moving from ‘high-tech’ farming to natural farming. It is now well established that natural farming gives more return in the long run than ‘high-tech’ farming. However, if one turns overnight to natural farming then there would be a temporary fall in the return, mainly because of the damage done to the soil by years of using pesticides and chemical fertilizers. This is indeed a difficult hurdle, especially because returns from agriculture in the open market are already quite low, and there is little cushion for experimenting with natural farming. A further fall in income – even if it is only temporary – is the last thing a farmer needs.

Diverse agriculture is seen by many as a solution to this problem. The essence of diverse agriculture is that, apart from rotating cultivation of regular crops like rice and potatoes, one grows very short term crops of various kinds. A very attractive option is to cultivate fish in the field itself. During the cultivation of many types of short term crops, the field stays submerged for several weeks. If pesticides and chemical fertilizers are not used, then various types of fish grow automatically in the field during this season in states like West Bengal. The young fish eat mosquito eggs and also check the growth of some pests. Abundance of trees and plants in the vicinity can only promote sustenance of various interdependent life forms (such as spiders) and consequent enrichment of the soil. Thus, the greening initiative would go hand-in-hand with diverse agriculture. The additional income generated from fruits, timber and firewood – together with the income from additional crops – may just tilt the economic balance in favour of natural farming.

An obstacle to diverse farming as well as the greening initiative, is exposure to cattle. The prospect of the wandering cattle straying into a field of growing hopes can be enough to prevent people from starting anything new. The need for additional vigilance can also be seen as opportunity for community work. As mentioned before, the club will coordinate the protection of crops and plants. In order to accommodate the cattle, some unused or underused plots may be earmarked for the growing of fodder, grazing of cattle and, possibly, a community shed. In fact, land used for planting trees can be used simultaneously for cultivation of fodder – at least in the

initial years. The cultivation and distribution of fodder can be overseen by the club, as a part of the greening initiative of the community.

There is another serious difficulty in growing diverse plants and crops. Over the years, a great deal of traditional knowledge – on how to tend to these different forms of greenery simultaneously – has almost passed into oblivion. This knowledge is invaluable because it is specific to local geography, climate and culture. One may have to turn to wiser heads to regain part of that knowledge as well as the confidence to manage numerous subtle aspects of farming.

By far the most difficult obstacle to the greening initiative is the existence of all kinds of conflicting interests. The tale of pursuance of self-interest – even at the expense of others – is as old as human history, and this is unlikely to change. Even though the greening initiative should not take anything away from anyone, the *perceived* possibility of loss in terms of money or power may be enough for some to try and scuttle it. There is no easy way out of this situation.

One need not lose hope, however. Human history also shows us that the social trait of man is at least as prominent as the selfish trait. The joy that we get from being one with others is incomparable. Yet, in the market-driven world order that places money over man, it is the selfish trait that has gained social acceptability in recent times. This need not be accepted as the last word. Another historic compulsion in the reverse direction is beginning to unfold. As natural conditions for habitation get steadily disrupted by large scale economic activities, as plant and animal species become extinct with a speed that surpasses even that of the extinction of dinosaurs, as the human souls are caught by droves out of their social and cultural habitats as if by invisible fishing nets and dumped in a uniformly mechanical environment, the isolation of man becomes increasingly complete. He feels as if he is a commodity, providing service and seeking services from others. Only through human relations can he regain his identity in the living world. The need for forming relations is becoming greater than every other human need today. In this context, selfishness on the part of an individual cannot be an insurmountable obstacle forever. Collective will – and the urge to touch every soul and carry everyone along – can win over the suspecting few.

Individual opposition is not a serious problem, but consorted opposition is. When a whole community of people is guided by a selfish motive, it is rather difficult to win over the entire group. Sectarian feelings may have existed in the past, but it was never as widespread and long lasting as it is now. A sectarian identity is in essence a practice of distinction between ‘us’ and ‘them’ around a perceived thread of commonality. Earlier, sectarian identities took shape around caste or religion. Today, such identities also exist around language, geographic region as well as socio-economic class. The latter distinction has become more prominent in recent times with steady accentuation of income inequalities. In the era of democracy, the political party has emerged as another basis of sectarian identity. With the society fraught with various divisions, one had hoped that the emergence of state power riding on a democratic system would relieve us of the ills of stagnation. Unfortunately, the establishment of the state as the supreme force has not only perpetuated but also accentuated social divisions on the basis of caste, religion, language, region, class – and now – political party. Sometimes the party is placed even above the state. With the centralization of resources under state authority, many realized that promoting

the party would bring them rich dividends in terms of money and power. Thus, democracy has brought in further communalism under the banner of the party. On the other hand, the society was divested of all its power and allowed to wither away – as if one would throw away a child if it is dirty.

The child that has taken its place, namely the state, is now seen as dirty, and is about to be meted the same treatment. The state is also rapidly losing its power – to trans-national corporations. This is happening amidst deafening applause by those who are sure to gain from this transition and another larger group that hopes to get a share of the booty. Even the political parties are trying to align themselves with the new messiahs. The vast majority that stands to be left out of the process forever is faced with a unique dilemma. They are powerless if they are isolated, but coming together under the banner of the party would at best bring some of them a bit of material relief – they would not get back the shade of the tree that they have lost. Neither the market nor the state nor the party cares for the shield of human relation that is vital to the physical, mental and spiritual well-being of man. Even those who are lucky enough to be materially well-off suffer from this deficiency. Material possession proves to be a woefully inadequate substitute for the love that every soul yearns for. Thus, there is no alternative to revitalizing relationships, which the greening initiative is all about. The more people get stranded, the stronger becomes the potential of the tide to turn at last.

Greenery and harmony – some precedents

The nature of the proposed greening initiative is different from other government or non-government initiatives in many ways. Yet the idea has resemblance with experiments undertaken elsewhere and practices followed at another period of history.

In pre-British India, the forest was deemed as common property. The common man was as much responsible for its protection as was the zamindar or local king. This notion continues in some parts of India even today. Society still protects *Deovani* forests in Maharashtra. The same can be said about *Oran* forests of Rajasthan. Living trees are just not felled in these areas. The commitment of the *Bishmoi* people of Rajasthan towards protecting forests and wildlife is legendary. The people of the *Mahar* caste in pre-British Maharashtra protected forests and ensured judicious use of forest products. Generations of *Mahars* have played this traditional role assigned to them by society. In West Bengal, tribal people specially protected forests designated as *Zaheera Than* or forests of God. Such forests are gradually shrinking into oblivion. A *Zaheera Than* can still be found next to the village Garia near Mallarpur of Birbhum district and in many other places of West Bengal.

Trees – especially fruit trees – in localities and fields are found in abundance in various pockets of north and south India. Greenery has a special place in society in Kerala. Diverse kinds of trees – including those for fruits, spices and flower – can be seen in between agricultural plots as well as residential areas. One can build on these experiences and traditions.

Experiments with socially initiated greenery have taken place outside India too. The example of Cuba shows how social participation can materialize in the face of a crisis and bring in remarkable change in the well-being of the common man. Because of stiff trade sanctions imposed by USA and its allies, Cuba's economy depended heavily on trade with the soviet block countries. Fall of the Soviet Union and regime changes in Eastern European countries in 1989-90 created an unprecedented economic and food crisis in this country. Yet, by turning to natural farming and harnessing social capital, the country effected a spectacular turnaround that was described by Jeremy Seabrook as "History of the Future".¹³ About 80,000 people have been employed there in the cultivation of 100,000 acres of land. As 75% of Cubans live in urban areas, small vegetable gardens have sprung up in cities also. The initiative in this regard are taken by local clubs. There are over four hundred such clubs and over 60,000 gardens in the capital Havana alone. Schools, hospitals and churches also play pivotal roles. The production of turnip, yam and banana tripled by 1994, while overall production of vegetables quadrupled by 1999. This happened while import of chemical fertilizers reduced by a factor of six (in comparison to 1989) and there was even greater reduction in the import of chemical pesticides.¹⁴

The example of Cuba is a special one. The exceptional social unity observed there was precipitated by an immediate sense of crisis shared by everyone. The government had also played a crucial part in mobilizing the people, who are mostly urban. These circumstances are quite different from the present Indian situation, although increasing hardship on the part of the general populace may eventually lead to an acute crisis. However, the Cuban experience shows us that human resources can once again reign supreme over material resources. This example can still serve as a beacon for the greening initiative.

Harmonious union of various sections of society lies at the heart of the greening initiative proposed here. The legacy of harmony is very much a part of Indian culture. Rifts between castes and communities are exploited and perpetuated by politicians, and widely publicized by the media. However, peaceful co-existence of various sections of society has also been a persistent aspect of Indian history, and stories of rifts cannot erase this fact. Gautama Buddha, Kabir, Nanak, Chaitanyadev, Ramakrishna and other preachers of commonality of all humans continue to be regarded with high esteem by common people all over India. The greening initiative can draw inspiration from their teachings.

Potential gains

A major advantage of the greening initiative would be that, by supplementing income and food and by providing a conducive atmosphere, it would give the requisite impetus to natural and diverse farming. There would be renewed hope of arresting the steady degradation and erosion of soil brought about by indiscriminate use of chemical fertilizers and pesticides. Production of chemical fertilizers and pesticides requires oil and other ingredients apart from energy. Lesser use of these chemicals would mean reduced depletion of finite resources and less pollution from industrial production. Pollution would also be reduced directly by the planting of trees.

One of the ill-effects of indiscriminate cultivation of rice has been a steady and unsustainable depletion of groundwater. The number of shallow tube wells in West Bengal increased from 20,000 in 1980 to 600,000 in 2004; the number increased to 10,00,000 by 2006. Several thousand litres of water are needed for producing one kilogram of rice. Lifting of groundwater requires energy, and much of the irrigating water does not trickle back to the underground aquifer. Turning to diverse farming of carefully chosen crops would reduce the demand for water. On the other hand, natural farming means abundance of natural matter in the soil, which has greater capacity to retain water. Trees planted in the vicinity would also bind the soil and help retain water. Some additional ponds may be dug to hold rainwater to ensure additional supply of water for growing trees and crop, where necessary. The loss of farmland from digging of the pond may be compensated for by local sale or barter of water for irrigation, and fish cultivation. The club has to ensure security for the fish.

Diverse farming would go hand-in-hand with the greening initiative. In fact, planting of trees *is* a form of farming – though for a medium or long term. Too much emphasis on short term returns makes one forget that what is best for him in the current season may not serve him well in the long run. Just as one has to consider term deposits together with the savings or current account balance at the time of counting one's overall assets, we have to include returns from short, medium and long term farming of all kinds at the time of stock-taking. The greening initiative signifies this change of mind-set, which is a necessary precondition for stability of returns on investment.

Symbiotic raising of crops, plants, animals and fish would involve concerted participation of people at all levels. This would arrest the widespread trend of people becoming surplus in their natural habitat, generate employment throughout the year, and make the conditions in villages more liveable. Thus, a reverse migration from towns and cities to villages would be promoted. Renewed faith in the village and renewed focus on farming is vital for a green society. There would be renewed opportunity for crafts and small scale industries that centre around agriculture. Folk arts and handicrafts that draw sustenance from a close tie with nature can spring forth in thousands of forms. If this happens, there would be no need for government schemes to patronize or preserve these art forms as relics of a lost civilization. Contentment and grace would return to village life.

Reduced dependence on the market for food and other essential items would go a long way towards bringing back stability to the local economy – which is essential for the stability of the economy of the country. The examples of Mexico, Argentina and Indonesia show us how pushes and pulls in a distant market can wreak havoc on an open economy. Such disasters can be averted if one does not have to depend on the global market for the buying and selling of items of everyday use. Most of these items can be produced and consumed locally. The greening initiative and the associated cultural shift would promote self sufficiency and would strengthen the local economy. New opportunities for local investment, including small scale agro-industries, micro-banking, schools and health centres would be created. A major advantage of investment in the local community is that the return does not always have to be immediate or even monetary. If the investment leads to stability of the community and enhanced goodwill for the investor, who along with his loved ones stands to be benefited well into the future, these gains count as returns on investment.

The ideal of equality in different forms has been part of many ideologies. Equality of rights, equality of wealth, equality of opportunity, and so on have been variously set forth as goals in different societies at different times. Yet, these egalitarian goals have become more elusive today than ever before. All over the world we find different standards of human rights for different sections of society, obscene levels of disparity in wealth, and utilization of opportunity by one at the cost of another. This makes the fortunate ones ill-at-ease because extreme inequality is known to breed discontent, social unrest, and terrorism.¹⁵ This precarious state of affairs may have something to do with *how* changes have come about – rather than the ideological underpinning. Today's agent of change is invariably a central force – a system that is incalculably more powerful than the individual. When a colossal machine-like system makes adjustments to meet a gross objective, the speed and scope of that change may easily exceed the natural limit to which a man can be stretched. He feels powerless and unable to control anything as an individual or as part of a local community.

For the community, autonomous greenery would be an attempt to reclaim some of the ground lost to forces beyond its control. It can adjust the scale and pace of change to suit the capacity of individual members. Through confluence of intertwined rights, shared natural wealth and collective opportunity, people can attain a sense of contentment which is perhaps the goal that lies behind the various ideals of equality.

Engagement of everyone in the society is a crucial aspect of the greening initiative. Persons who would run the club as members of *samsad*, those who would collect seeds and saplings and plant them, those who would have patrolling duty, those who would contribute seeds and saplings, and even those who would provide special expertise can relish the task as work for a healthy cause. A welcome change would be the return of dignity and social value to a section of people previously regarded as surplus. Gains made by one section of the society are not meant to be at the expense of another section. Everyone would gain a little, both individually and collectively, though these gains may mean more to those who are currently living on the edge. This change will help to bring in a measure of social security, without which state-sponsored security is bound to be meaningless.

Abundance of fruit trees and vegetable plants would ensure a steady supply of fruits and vegetables of different kind round the year. Many of these items can be eaten directly or with minimal cooking. Apart from savings on fuel or firewood, there would be positive effect on health due to increased presence of vitamins and minerals in the diet. Another indirect health benefit may come about if fruit snacks can recover some of the space captured by fast food.

In countries like India where the climate is hot almost round the year, working under the blazing sun is not easy. In the past, there used to be some fruit and shade trees even in the agricultural fields. These trees have disappeared with increased pressure on land. Intense pressure of the global market has meant that every available bit of land has to be utilized for the prevalent crop of the time. As a result, the small farmer or wage earner has to toil away in scorching heat, sometimes risking their health and even life. Many proponents of human rights have little idea as to exactly how harsh this workplace is in comparison to air-conditioned auditoriums and cars. A workplace with adequate shades should count as one of the fundamental

rights of every human being. Those who have had their 'right to shade' violated can regain it through controlled expansion of greenery. How welcome for them would be a little break for meal under the shade of a small tree in the field itself !

The shade of a tree is a treasure. It cannot be used continuously by a single 'owner'. A shade tree symbolizes shared benefit as well as shared responsibility which the greening initiative is all about. Shade trees in the field can help us overcome another loss in an indirect way – the loss of opportunity for school education. When the mother goes to work in the field, she has to leave her young ones at home. When a child is very young, the mother cannot afford to leave home, even if that means loss of pay. Financial hardship means that going to school is a luxury. When the second or third child is young, it falls on the elder siblings to take care of them so that the mother can go to work. This is a huge impediment to going to school. The legacy of not going to school is passed on to successively younger siblings. (This aspect is never considered in academic research on the causes of low enrolment in or high dropout from schools.) If the wage earning couple has the option of leaving a small child under a tree in the field, they can both work in the field, and afford to send the elder children to school.

The availability of nutritional supplements to the family of wage earners can also enhance the children's education by making redundant the mid-day meal. Free sops do not go as well with education as they do with toothpastes or energy drinks. In many ways the mid-day meal is a nuisance in the educational arena. It turns education into a not-so-desirable appendix to the main attraction, promotes dependence, brings prejudices into focus and promotes corruption. The purpose of empowerment through education is squarely defeated. This menace can be eliminated if the children of school-going age have alternative sources of nutrition and their parents can afford to send them to school instead of counting on their services.

A section of the academic world can also benefit from participating in the greening initiative. Exploring easier and more effective ways of expanding greenery can be the subject of research. Seed banks such as the one set up by Dr. Debal Deb¹⁰ can be set up. Comparative studies of various practices suitable for different conditions can be undertaken. If the study touches the lives of real communities, the academicians behind it would surely have a rare sense of reward. Given the huge diversity of land, climate and other conditions in different parts of the country, there is considerable scope for such studies.

Glimpses of a green society

In many ways man has lost his links with the natural world. A green society would strive to recover this loss. The society could celebrate the re-established ties with nature through a festival. Many indigenous societies already have such festivals. In some societies, the ritual worship of a mother goddess has roots going back to a visceral link with nature. One can look for creative extensions of these festivals where emphasis would be on the oneness of man with nature – somewhat in the spirit of the *Hala-karshana* and *Briksha-ropana* festivals transplanted from the time of the *Upanishadas* by Rabindranath Tagore in Santiniketan. Likewise, the birth of a

child could once again be marked by ceremonial establishment of a linkage between the newborn and a tree. Such a custom exists among aboriginal tribes in South America as well as the Andaman Islands.

The villagers in the green society would not have to look upon the distant town for their livelihood. Livelihood itself would be less dependent on formal employment. The crop in the field, the fish in the pond and the plants, trees and animals raised in every available nook and corner would demand a great deal of attention and affection from the people, who in turn would have a source of healthy sustenance. The wealth of a green society would consist of life in numerous forms. This wealth would lie everywhere – in the fields, ponds, rivers and in the little hutments. It would be seen in the fingers of a villager adding another stroke of paint to the picture of the green society. It would be seen in the intense expression of the villagers' collective will. This wealth cannot be secured by individual or hired effort, as it does not fit nicely into bank lockers or to the confines of a walled compound. Security can only come from close ties of the society and of human relation. The term 'relation' is often misused to indicate convergence of interests, or an exercise of sentiments based on familial or clannish ties. Yet, the essence of a human relation lies in the process of expanding ones idea of 'self', and seeing others as a part of that self. Lack of human relation is a form of pollution too. Its ill-effects are well known – ranging from isolation of the soul to over-consumption, clash of individual interests, lack of collective goals and all-round shortage of collective hope.¹⁶ Unlike the culture of competition that puts relations under incessant stress, the need for cooperation to secure the wealth that lies in the open field of nature would provide a context for the building of truly human relations. Rather than communality, the stress would be on the commonality and interconnection of all beings. In this age of individual deviations and social disarray, with the spectre of all-pervasive pollution lurking in the background, it is human relation that holds out the prospect of a sufficient future. The joy derived from real relations would help the man to break free from various acquired compulsions. The green society is his only hope for escaping the lethal cloud of comprehensive pollution that looks set to consume the world around him.

*Welcome are all earth's lands, each for its kind,
Welcome are lands of pine and oak,
Welcome are lands of lemon and fig,
Welcome are lands of gold,
Welcome are lands of wheat and maize, welcome those of
the grape,
Welcome are lands of sugar and rice,
Welcome cotton-lands, welcome those of the white
potato and sweet potato,
Welcome are mountains, flats, sands, forests, prairies,
Welcome the rich borders of river, table-lands, openings,
Welcome the measureless grazing-lands, welcome the
teeming soil of orchards, flats, honey, hemp;
Welcome just as much the other more hard-faced lands,
Lands rich as lands of gold or wheat and fruit lands,
Lands of mines, lands of the manly rugged ores,*

*Lands of coal, copper, lead, tin, zinc,
Lands of iron – lands of the make of the axe.*

Walt Whitman.

Appendix: Answers to Some Questions

During the course of lectures and discussion on the matter of autonomous greenery, I faced questions on a number of issues which could not be accommodated in the main article. The questions came from Shri Ram Pearsa Saraf of Jammu, Shri Shasha Priya of Jaypur, Shri Vinod Swami of Hanumangarh, Md. Saif of Murarai and some other friends and students. I summarize below my response to a few such questions.

Can the members of the samsad be elected by majority vote if consensus is not achieved?

No. Election of members by majority vote contradicts the very spirit of 'autonomous greenery'. The minority cannot be bypassed. The minority can sometimes be only a little smaller in number than the majority. Also, history tells us that wisdom generally lies with a small minority.

Whenever the prospect of decision by majority vote lurks in the background, the possibility of consensus melts away. If a split between majority and minority is allowed, then the very possibility that the 'defeated' group *can* be ignored at will by the prevailing group, allows peoples' ego to play an unnecessary role in the deliberation. What is needed, on the other hand, is that the opposing inclinations lying dormant within an individual express themselves. When the call of the conscience – the opposition within – is heard, an opposition 'group' looks rather artificial. A fusion of conscientious response of members can take place through the process of consensus.

It is not the sharpest brain that has to be chosen as the leader. Bright managers may be well suited for big organizations that seek to mechanically utilize its resources, in order to maximize an impersonal criterion such as profit. For the greening initiative, the resources are human beings, and even the sharpest brain may not have a clue as to how the people can gel together naturally. Also, the criterion is not a cold, mathematical figure. The success, or otherwise, of the greening initiative may not even be measurable. If the glow in the eyes of the villagers become a little brighter down the line, only then one would know that the achievement has been more than that of mere completion of a project. Completion of a project brings complacency and longing for a vacation; a sojourn in pursuit of a collective dream – like the greening initiative – makes one long for further journey. A group of individuals that pursues a collective dream cannot be an ordinary group – it has to be a large family bound by the bond of kinship. Since the idea is to build a larger family, the members of the *samsad* – the key members of the family, not necessarily the oldest or smartest ones – have to be those with a large heart. And consensus is the only way of identifying and bestowing collective faith in them.

Is the proposal of 'autonomous greenery' compatible with development?

The question surely is not about a single dose of development, like the building of a particular road or the setting up of a particular industry. The implied question is about the compatibility of the greening initiative with the series of developmental activities that follow from the imperative of economic growth. Growth is a *perpetual* necessity in a market economy which is a collection of entities that must grow continuously in order to survive. The trouble is: perpetual growth is not possible without perpetual pollution (no matter how religiously one denies the obvious) and perpetual drain on natural resources. Some natural resources like forest produce are renewable, but are allowed to be used up at unsustainable rates. Other resources like minerals and fossil fuel are non-renewable. Steady depletion of these resources, as well as steady accumulation of pollutants in a finite world cannot go on indefinitely.¹⁵ The ever expanding balloon has to burst one day, and the price for our recklessness will have to be paid by our own children and grandchildren. However, like the unfortunate patient who becomes dependent on steroid, the immediate beneficiaries of development, including national and state governments, become addicted to economic growth. Quitting an addiction becomes more and more difficult everyday.

However, there are alternatives to the path of economic growth. Instead of allowing the human need and the human population to grow indefinitely, one may strive to bring these into equilibrium with the capacity of nature. Most of the basic, material necessities of life could be produced or procured locally on a sustainable basis. A local community may seek to make the local economy as much independent of the outside world as possible, so that it is not vulnerable to global pushes and pulls.

Numerous experiments with these alternative models of economy are taking place around the world.¹⁷ These include efforts to make possible a workable transition from a dependent to independent economy. 'Autonomous greenery' should be compatible with these initiatives. In spirit, it is not compatible with (perpetual) economic growth.

Can the greening initiative create more jobs than economic growth?

As far as opportunities for livelihood are concerned, economic growth returns with one hand only a fraction of what it takes away with the other. Forces of the market compel all competitors to maximize return on investment. A crucial instrument for increasing efficiency is automation. Thus, human input gets steadily substituted by a machine or a computer. There are invisible subsidies which make this a lucrative option. First, one needs fossil fuel to manufacture, process, package, transport and market mechanically produced goods or automated services. The price of this fuel is largely determined by the cost of lifting and extracting this vital and non-renewable resource. The revenue earned by the governments in the process is comparable to the interest payment on a debt – while the capital is written off with no regard for future generations of citizens. Similar subsidies are given for other mineral and natural resources. Another huge but hidden subsidy is given in the form of the permission to pollute with little or no penalty. The subsidy, in this case, comes

from the unwitting ordinary citizen – including the so-called poorest of the poor. Involuntary subsidy is also given by developmental refugees – people who are forced out of their natural habitat because of the eagerness of the government to attract investment. Compensation is invariably a secondary issue for the government and the judiciary, and many of these losses cannot possibly be compensated anyway. Apart from these indirect subsidies, the governments also provide direct subsidies in the form of tax/duty relief and other incentives for investment. If all these subsidies are taken into account, then the practice of substitution of man by machine would often make no economic sense. In the absence of these crucial factors in the balance sheet, we have a stream of retrenched workers, developmental refugees, evicted people, and small farmers or traders gone out of business. Often these losses and creation of job opportunities happen in different places, thus making it difficult for anyone to weigh the pros against cons within a geographic boundary.

Another aspect of mechanization occurs in respect of systems. In a global scenario, only those management practices and organizational structures that are accepted to be the 'best' survive. There is a tendency to transform all systems into a uniform mould. The role of the individual – except in a handful of situations – becomes progressively restricted. Even a manager or an executive has to act in accordance with a specified objective, the compulsion making him act almost like a machine. Thus, even among the fortunate few who are not displaced by a machine, a large section has to act as part of a mechanized system. No one cares for their identity as a human being – what matters most is their utility to the system. This utility may be substantial because of some special skills, knowledge, ability or intelligence, and may fetch rich compensation, but the fact of a mechanical existence still remains.

The greening initiative, on the other hand, relies heavily on human participation. Full participation of members is given highest priority. Also, if the club gradually ensures a minimum of 40 trees and 10 Kg of fish per year for everyone, and allows the 'surplus' people to play a role in the collective effort, then the question of generating formal and regular employment would become secondary. Once this goal is reached, the only major need of a healthy mind remains aesthetic satisfaction. In other words, very little would be expected of the state or the society at large. Revitalization of the villages would mean fewer loss of livelihood in various forms. And this would be achieved while enriching – not degrading – the environment.

Can any government ever allow 'autonomous greenery' to take shape?

Most of the governments of the present day – irrespective of the beliefs of the people running them – attempt to align themselves with the global economy. Compulsions of staying competitive and attracting investment make them ineffective against the growing problems of social unrest and environmental degradation. However, elected governments have to demonstrate their seriousness about these issues. There is no reason why a proposal that seeks to give limited autonomy to small communities and to restore greenery, should not have the government's blessings. Winning the government's support will be relatively easy. It may be more difficult to convince the government that no external funding is necessary.

Local autonomy in respect of greening is only the focal point of this proposal. What lies behind is the spirit of revitalizing local communities and the local economy. It is envisaged that the society would reclaim some of the space it had ceded to the government. It is only natural that a strong local economy would reduce demand for goods and services from the global economy, and result in loss of revenue for the government. It may appear that no government would relish the prospect of gradual shrinkage of its role. However, the reduction in the government's revenue would be accompanied by reduction of its responsibilities also - responsibilities that it is ill-equipped to carry out. The scope of governmental activities gets similarly diminished through privatization. A rational government need not be averse to reduction of its role through 'societization', particularly if it appreciates the consequent benefits to the electorate.

There are some hazards though. Unlike privatization, societization would not lead to circulation of large volumes of money. There will be less windfall for government functionaries. This may stand in the way of continued support from the government. Allowing the greening initiative to proceed on a small scale may be all that a government would be prepared to do for the time being.

As the perils of the mad rush for economic growth become increasingly clear, and small and independent communities begin to flourish here and there, the climate may gradually become more conducive for the government to relent.

Is it feasible to begin 'autonomous greenery' in a small community while the current paradigm of development prevails all around?

There are many who see development, or more generally economic growth, as the only promising path to a future of plenty for all. This assessment is often based on direct experience. Developmental work has been observed to bring in economic well-being to many, within a relatively short span of time. However, the fallacy of indefinite growth on a finite resource base, as well as the associated environmental costs are now becoming clear as daylight. We have to switch to a sustainable way of life. There are short-term hazards to this transition, and ways of dealing with these have been outlined in the section 'Initial hurdles - how to overcome them.'

Another stumbling block is that, many of us have become addicted to the little conveniences of the resource-intensive and wasteful way of life. Quitting any addiction has to be done with utmost care and consideration for the well-being of the addicted. Those addicted to development are very much a part of us. When a community musters the will to go for an alternative way of life supplemented by the greening initiative, there may still be doubters and development-addicts living in and around the community. The community cannot afford to isolate itself from them. Everyone who comes in contact with the community should know all about what is taking shape there. The community should be absolutely open in this regard.

In today's villages, there live a number of people owing allegiance to the government, a political party, or some other central entity. These people suffer from a peculiar isolation. This isolation is often institutional. In respect of government servants, the official view is that too much mixing with the local people breeds

corruption, and this should be pre-empted by frequent transfers. Benefits of healthy and humane relations with the local people are overlooked. These relations could have made the employee or agent live a more meaningful life. The community in turn could have gained more from them. The craving for relations is basic to human nature. Fulfilment as a human being does not come without it. An existence without fulfilment through human relations is, in a sense, a sub-human one, even if human intellect is utilized. The community should have the passion to integrate these people with its entire endeavour, including the greening initiative.

It has already been noted that it would not be difficult to get the government's blessings for the greening initiative at the initial stage. The gradual inclusion of the employees or agents would be an important force that would allow the greening initiative to retain its momentum beyond this stage.

A market dominated world order may be a powerful reality today, but it is, ideologically, a spent force. It does not inspire young minds any more. The idea that is capturing the imagination of today's minds is that of returning to a harmonic existence with Nature. We witness this in the green movements around the world, in the renewed interest in ways of life of indigenous people, in the regularity of unexpected challenges faced by efforts to expand the domain of the market, and in many other writings on the wall. The vigour of a small plant growing in a crack of a brick wall need not be underestimated.

Doesn't embracing a life among trees, fish and cattle amount to regressing back to medieval days?

What goes up must fall down. If we continue to increase our level of consumption while polluting the environment at an unsustainable rate, then we may soon be forced to return to pre-medieval days. However, we are not just talking about making a little sacrifice in order to prevent greater losses. Through the greening initiative, we are in fact looking forward to a *better* quality of life.

The path of development can offer us a higher standard of living (meaning greater rate of consumption of goods and services), but it does not necessarily lead to a better quality of life. Advocates of development make a great fuss about greater purchasing power and wider range of consumer choice. On the other hand, many choices made by the consumer are indeed involuntary. These include the high-tech water purifier we are forced to buy because natural sources of drinking water have become polluted, the latest model of computer we bring home because the spare parts for the existing one have gone out of market, the new pair of jeans our children need because they cannot afford to lag behind their peers, and so on. Besides, the benefits expected out of newly purchased items do not materialize when others purchase it too. When I buy a car, it gives me greater freedom to move about. That freedom is significantly diminished when I get caught in a traffic jam. The satisfaction of buying a car is gradually replaced by the anxiety of damage, theft and the unromantic prospect of others buying a car too. Traffic jams, accidents and pollution caused by too many vehicles degrade the quality of life of even those who did not buy a car.

The freedom of choice has actually diminished in many ways with the advent of free market. Domination of a few varieties of goods is natural in a competitive market. Many varieties of mangoes that were found thirty years ago are not seen any more. The same goes for other fruits. The variety of fish has also reduced. The rich diversity of crop seeds that existed for centuries is getting diminished at an alarming rate. A rich collection of snack items has given way to fast food. The disappearance of so much variety in so many items cannot be explained by a coincidental convergence of personal choices. There must have been other compelling reasons. In other words, what we get is not what we choose.

Leaving aside the freedom of choice, other freedoms get progressively curtailed in the 'modern' way of life. The process of automation was supposed to relieve people from the drudgery of work so that they can have more time for leisure and aesthetic pursuit. This has not happened. People have not had more leisure. Everyone speaks of a 'faster life' and 'lack of time' today. Besides, it cannot be said that scope of freedom *through* work has increased. People engaged in work are often expected to play a mechanical and constrained role. The satisfaction derived from this kind of work is not comparable to that obtained from tending crops, plants or cattle, where response to one's own little adjustments and experiments is perceptible. The limited and controlled contact with nature and the environment is another deprivation of freedom.

Apart from the freedom to do what one wants, one also needs the freedom of not doing what one does not want. This freedom has been severely curtailed by the imposing presence of the free market. Everyday we are bombarded with sights and sounds that we detest. Many of us have to latch on to a moving system which is too fast for us. The maintenance list of home appliances becomes a prolonged punishment. These are some of the losses suffered by those who are in the mainstream of society – those who may have gained something in exchange. On the other hand, for thousands of years a section of people have opted out of the mainstream of society to live as vagabonds or wanderers. Socrates, Plato, Van Gogh, Lalan Fakir and numerous others belong to this class. These people now have nowhere to go because their natural habitat stands confiscated. If 'development' had been invented a couple of thousand years ago, we would not have the music, art, philosophy and other treasures that we have inherited from these fringe dwellers.

The suggestion of 'regressing back to medieval days' has the connotation of returning to a closed society dominated by rituals and convention. It is unrealistic to expect that we will necessarily bring back the bondages that we have shed during the course of our journey through history. On the contrary, there are many modern bondages that must also be shed to move forward. A new technology, like many others that preceded it, may do more harm than good; there is no need to be overwhelmed just because it is 'new' or because it is 'technology'. We often give the latest technology as much unquestioned respect as medieval people gave to various deities. We are yet to learn to accept and use technology selectively and scientifically, with an eye to the health of the society. We have the same unquestioned reverence for the boss in the office as people of another century had for the dominant person in the family. Our faith on money and market is no less than a religious dogma.

The greening initiative would provide us an opportunity to break out of the shackles of these modern bondages and to move forward.

References

1. Barton, Gregory (2000). Keepers of the jungle: Environmental management in British India, 1855-1900. *The Historian*, Vol. 62, No. 558 (March 22), pp.557-574.
2. Government of India (1952). *National Forest Policy for India*, New Delhi, Ministry of Food and Agriculture Resolution. Document downloaded on April 11, 2006 from <http://forest.ap.nic.in/forest%20policies/1952%20Forest%20Policy.htm>.
3. Tiwari, Manish (2004). *Lessons Learnt from Sustainable Forest Management Initiatives in Asia*, downloadable from http://www.ksla.se/sv/retrieve_file.asp?n=747.
4. Bhattacharya, Prasanta (1986) *Burdwan University Science Journal*, Vol. 3, No. 1, p.88.
5. Government of India (1988). *National Forest Policy 1988*, New Delhi, Ministry of Environment and Forests. <http://www.envfor.nic.in/nfap/detailed-policy.html>.
6. Mishra, Tapan (1998). *Banglar Bon Jangal*. Pashchim Banga Bigyan Mancha.
7. Guha, Ramachandra (1983), Forestry in British and post-British India: A historical analysis , *Economic and Political Weekly*, Vol. 18, Issue 45, 29th October (Part I) and Issue 46, 5th November (Part II).
8. Schultz, Theodore (1964). *Transforming Traditional Agriculture*, Yale University Press, New Haven, CT, USA.
9. Douthwaite, Richard (1998). *The Growth Illusion* (second edition), Lilliput Press.
10. Menon, Meena (2001). The grain story, *The Hindu*, 2nd July, 2001, <http://www.hinduonnet.com/businessline/2001/07/02/stories/10020309.htm>.
11. New reports, *Bartamaan*, 16th and 24th June, 2004.
12. Dabholkar, Shripad A. (1998). *Plenty for All*. Mehta Publishing House, Kolhapur.
13. Seabrook, Jeremy (2003). A short history of the future. *The Statesman*, 20th April.
14. Sinclair, Minor (2001). From big to small, toxic to green: new strategies to grow food in Cuba, *Revista*, Spring 2001 (Issue on Food in the Americas), <http://www.fas.harvard.edu/~drclas/publications/revista/food/Sinclair.html>.
15. Dreeze, Jean and Sen, Amartya (1995). *India: Economic Development and Social Opportunity*, Oxford University Press.
16. Goswami, Paramesh and Sengupta, Debasis (2006). *Pragati Marichika*, Visva Bharati.
17. Douthwaite, Richard (1996). *Short Circuit*, Lilliput Press.