

RELEVANCE OF GANDHIAN ECO-VISION

A. Pushparajan[♦]

1. Introduction

The relevance of M. K. Gandhi has been discussed ad-nauseam by various people in a variety of ways. For a few people today it has become a fashion to question the relevance of Gandhian thought. There is, however, an area which Gandhian relevance can never be disputed about. It is his ecological concerns. Even those who think that Gandhi is totally irrelevant and useless will have to accept his eco-vision.

Obviously Gandhi was not an academic thinker in the professional sense. He had not presented an eco-vision as such in a theoretical form. Although his writings run up to 100 volumes of nearly 500 pages each, they are mostly fragmentary, context-oriented, and occasion-centred. So, whatever he spoke or did in reference to ecological concerns are interspersed in his copious writings, and submerged in the numerous contexts. It is, indeed, a treasure-hunting task to find out the relevant portions from among the scattered writings of Gandhi and synthesize them so as to form and formulate the Gandhian eco-vision.

The severe ecological problems that affect us today are precisely what Gandhi predicted several decades ago. Had the world listened to his warning already at that time, we would not have got into such a muddle in which we are found today. It is against the background of those fears and concerns that the emergence of Gandhian eco-vision becomes meaningful and urgent. Therefore, the first part of this paper gives a brief description of the varied environmental problems that affect humanity today.

Profound thinker as he was, Gandhi was concerned more with tackling the root cause of the problems. In his opinion, the very approach of modernization and industrialization was wrong. For all the malaise of ecological distortions and deterioration, it was industrialization-regime that was the real culprit. Hence, the next part of this paper deals with reasons Gandhi gives for considering it so. The recent statements made by world

[♦]**Prof. Dr. A. Pushparajan**, retired Professor of Philosophy and Religions, currently resides in Bengaluru, and lectures in various institutes on Inter-religious Dialogue, Ecology, Gandhian Spirituality, and Theology. He has authored 17 books and has published over 200 articles in scholarly journals.

scientists resonate with the same themes and feelings of Gandhi. Hence, the standpoints of present-day scientists as well as the Gandhian viewpoints are presented in this part of the paper. Then, in the light of the considerations, I try to make a synthesis of Gandhian insights and practices regarding the ecological concerns and formulate the Gandhian eco-vision.

2. Context of Ecological Crisis

The variety of environmental problems that we face is too evident to be elaborated here. However, a brief description is necessary for our purpose.

- The destruction of tropical forest is happening so quickly and recurrently that in the last 200 years alone 19% of forest area of the earth has been lost from the total area of just 33 per cent. It is like two third of skin is peeled off from an animal.
- Soil erosion owing to desertification of lands and torrential flow of waters.
- The increasing diminution of energy resources like the coal and petroleum products, and other fossilized resources.
- Depletion of Ozone layer (too universal to be ignored today) is quickened.
- The impurity of air is ever growing: The excessive emissions of the automobiles massive fume from the industries like textile mills, cement plants, steel plants, chemical plants, fertilizer set-ups, thermal plants, etc., have impaired the role of plant kingdom to purify air so much it is beyond the capacity of trees to keep the balance of purified air
- Impurity of water even causing new deceases like the Mina Mata disease of Japan, mercury released and paper mills' effluents found their way in the shallow parts of eastern coast of Japan (the mercury compounds like methyl mercury and diethyl mercury got established in the fish and the sea weeds).
- Infertility of soil spreading fast because of over use of urea, chemical fertilizers, and pesticides like DDT (Dichloro Diphenyle and Tricholoro), ethane, etc., sprayed on vegetables, fruits, oil seeds, and cereals.
- Salinity and impotability of water as a result of over use of chemical fertilizers or effluents from heavy industries mixing with river waters and sewages of big cities
- Acid rain: The toxic gases are so overspread in the atmosphere that when they get moisturized by rain water they turn out to be acid and fall on the

earth as acid rain. For example, sulphur dioxide over the vast spread of lakes turned out to be sulphuric acid and, thus, has caused death of numerous fish.

- Water logging, siltation of water, and sedimentation mostly arising out of big dams are on the increase.
- Extinction of many species: Due to the induction of hybrid varieties of vegetables, paddy crops, and genetically modified varieties of rice, etc., the local paddy varieties are getting vanished.
- Extermination of wild life happens mainly because of too much of disturbance of forest habitat.
- Toxic wastes, such as non-biodegradable materials like plastics, synthetic polymers, or the by-products of the nuclear plants dumped into the earth or ocean not only contribute to the accumulation of wastes, thereby breaking the cyclic process of life but also poisoning the bio sphere.
- The most common problem is the pollution¹ of all sorts. Air pollution is so intensively prevalent as to produce acid rain. Water pollution, owing to the numerous industries on the banks of rivers which pass their toxic effluents, is so much that waters of the 'holy' rivers of Ganga or Kaveri are no more potable. Mina Mata disease is a glaring example of pollution of water even in mighty oceans. Soil pollution is such a common thing today that many of our fertile fields have not only lost their fertility but also the underground water is not pure to drink either.
- The Green House Effect: The excessive use of fossil fuel has added to the atmospheric concentration of terrace gases like carbon dioxide, methane, and nitrous oxide, which, in turn, prevent the refraction of heat from the earth at night and has created global warming.

¹It is important to specify the technical meaning of the term 'pollution'. It is not simply any dirt that is called pollution. Nature has the miraculous capacity to dissolve or dissipate a dirty material and, thus, to clean up the environment. However, when the dirt, often the by-product of human activity, gets accumulated to such an extent that it exceeds the capacity of the ecosystem to handle it by dissipating or dissolving then only it is said to be pollution. For instance, if a group of four persons smoke a cigarette each in the open air, dirty fume is dissipated in the air and gets lost. If, on the contrary, the same group of four persons smoke in a closed room, anyone who enters the room may even get suffocated. The simple reason is that the dirty fume emitted in the room is too much to be dissipated or diluted or dissolved by the limited amount of air available in the room.

- **Global Warming:** Already in the year 1869 a scientist by name S. Arrhenius mooted the principle of global warming in his paper, “On the Influence of Carbonic Acid in the Air upon the Temperature of Ground.” It took over a century for it to gain ground. In the late 1980s and early ‘90s, it was found that the earth’s air temperature had warmed over the past century, because of the emission of increased carbon dioxide. But today global warming is established “with a near consensus among the world scientists.”² For, the recent Report by Intergovernmental Panel on Climate Change (IPCC-2007)) prepared by the world scientists and adopted by representatives of 113 world governments has given a growing body of scientific evidence for global warming. Among the findings of the scientists the Arctic region with glaciers is shrinking and, therefore, the Arctic Ocean could largely be devoid of ice during summer later in the century. It means that hot days, long summers, heavy downpours, hurricanes, and storms will be more the rule than exceptions in the coming years.

The merit of Gandhi is that he forewarned precisely this catastrophe which the scientists fear today. More interesting is that the cause of the problems as well as the solution to the problem suggested by the scientists today is exactly what Gandhi suggested during his time.

3. The Cause of the Crises

The ecological disasters mentioned above are all what Gandhi forewarned many years ago. When he predicted them during his life, people did not appreciate him. Rather they dubbed him as prophet of doom. They criticized him as one who was dragging humanity to bullock-cart civilization. However, today there is a greater awareness among people that the varied environmental problems are not sporadic or freak events of nature. There is a human factor involved in the ecological crises. They are the results of the developmental activities. Gandhi was perceptive of the same even during the early decades of the 20th century. He objected to development with respect to both of its dimensions: 1) technological and 2) economical. It is striking that scientists express opinions which correspond to the very same objections Gandhi gave years ago. Hence, it may be

²James Kanter and Andrew C. Revkin, “World Scientists Near Consensus on Warming,” *The Hindu* (Bangalore), January 31, 2007, 19.

interesting to glance at the opinions of the scientists first, and then see how best they corroborate Gandhi's observations.

3.1. The Technological Development

It is the unanimous opinion of the world scientists that modern science and technology have exerted an undue influence upon the eco-systems both local and global. It is said to be undue because it has exceeded the sustainable limits of the Earth's capability. The first wake up call from the scientific world came in 1972, when the "Club of Rome" published the book *Limits to Growth*³ authored by renowned scientists Donella H. Meadows, Dennis L. Meadows, Jergen Randers, Jørgen Randers, and William W. Behrens. Then, in the year 1993, Donella H. Meadows, Jergen Randers, and Dennis L. Meadows published *Beyond the Limits* as a 20 year update on the original material. The most recent updated version was published by Chelsea Green Publishing Company in 2004 under the title, *Limits to Growth: The 30-Year Update*.⁴ The kind of limit is seen firstly in terms of the fund of energy resources (the non-renewable resources) exemplified by an impending crisis in petroleum supply, the coal, oil and gasoline, on which modern scientific technology largely depends. Billions of years have taken for formation of these resources. If one draws just a litre of petrol from the earth now, one has already used up what Nature has been processing for millions of years. Or, one has to wait for a million years more in order to get a litre of petrol formed. But much of them have been exhausted within the last two hundred years alone. How, then, could it go on for ever?

The second kind of limitation the scientists describe is in reference to the functional capacity of the ecosystem. The earth's capacity for life is set by the quantity of sunlight reaching the earth's surface as well as the rate of replenishment of renewable resources such as wood or water. This capacity gets either destroyed when its renewable resource is used faster than it can be regenerated or distorted by pollution. The Report by Intergovernmental Panel on Climate Change (IPCC-2007) states: "It is now scientifically substantiated that we have lost for ever a great deal of our tropical forests,

³"Limits to Growth," *Wikipedia: The Free Encyclopedia*, http://en.wikipedia.org/wiki/Limits_to_Growth 07-02-2007 [Online].

⁴"Limits to Growth," *Wikipedia* [Online].

glaciers, decertified lands, species.”⁵ The same Report further states that rising greenhouse gases and temperatures could soon overwhelm the natural systems that normally keep their levels in check. About half the 24 billion tons of carbon dioxide generated by human activity each year are absorbed by forests and oceans. The Report of the IPCC further acknowledges the role of human hand behind global warming with 90 percent certainty, as against its Report (2001) which placed a 66 per cent onus on the human factor.⁶

It is not individuals’ acts that have imperilled the environment. It is rather the modernist and industrial civilisation that is the real culprit. The present-day ecological crises indicate that the very approach of modern science and technology was wrong. The IV Report of the IPCC has made scientifically confident statements that, in making choices over the past couple of centuries, human beings have made many mistakes – mistakes that cannot be corrected. It says, with enhanced confidence, that it is the lifestyles chosen by the people since the industrial revolution, defined by fossil fuel use that has added to atmospheric concentrations of GHGs, which, in turn, have accelerated global warming. The cumulative effect of GHGs released by people for attaining welfare will be the depletion of our collective natural wealth, which can in the extreme case even lead to the extinction of life on earth. Whatever GHGs have been emitted over the past 100 years by the Annexe I countries⁷ are already affecting our lives now. With more emissions to come due to the developmental projects by the Annexe II countries⁸ we are destined for catastrophe.

What is done is already done. But at least care must be taken not to add further impurity into the already polluted atmosphere. According to Richard Betts, leader of the research team at the Met Office’s Hadley Centre for Climate Prediction, “the next 10 years are crucial.” For, “in that decade we have to achieve serious reductions in carbon emission.”⁹

⁵Joyashree Roy, “Globally Warmed Up Questions,” *The Indian Express* (New Delhi), 14-02-2007, 10.

⁶“Climate Concerns” (Editorial), *Deccan Herald* (Bangalore), 07-02-2007, 10.

⁷The First world countries are listed in the Annex I.

⁸The Third World countries are listed in Annex II.

⁹Cited in Jonathan Leak, “We Have Just 10 Years to Save the World: Warn Scientists,” *The Times of India* (Bangalore), 29-01-2007, 17.

It is in the context scientists' description of the crisis as well as their prescription of the remedy that Gandhi's critique of modernization is greatly significant. Already in the year 1889, Gandhi, after reading a book *Civilization: Its Causes and Cure* by Edward Carpenter, began to publish his first writings criticizing the approach of the technological developments of modern civilization in his *Journal of Vegetarian Society*. Later, his manifesto, *Hind Swaraj Indian Home-Rule* (1909), gave a decisive call to reject industrialization. It describes the dismal picture the industrialized civilization would bring in. The following passage will suffice as an example:

For ... industrial society was selfish, competitive, and *grossly destructive of nature*. The distinguishing characteristic of modern civilization was infinite multiplication of wants. To satisfy it, one has to forage far and wide for new materials and commodities. I wholeheartedly detest this mad desire to destroy distance and time to increase animal appetites and go to the ends of the earth in search of their satisfaction. If modern civilization stands for all this, and I have understood it so, I call it satanic.¹⁰

This, in turn, means excessive interference with Nature which is wasteful.

When we, through greed or false notions or a wrong sense proportion, interfere with nature hoping to obtain short-cuts, we generally end up by being wasteful. Nature does not believe in short-cuts. The mills of God grind slowly. Hence in our hurry, we often bring destruction on our heads and we imagine such quick results to be a sign of progress.¹¹

A perceptive thinker as he was, Gandhi clearly foresaw the wrong direction in which the modern industrial civilization was set. Its values were short-lived, as against the classical traditional values which had withstood the test of time. Hence, by insisting on the age old traditional values, Gandhi tried to withhold the values that went under the name of modern civilization. "Surely modern civilization is not millennia old. We can almost give its birth in exact date. If I could do it, I would most assuredly destroy or radically change much that goes under the name of modern civilization."¹²

¹⁰M. K. Gandhi, *Hind Swaraj: India's Home Rule*, Ahemadabad: Navajeevan Publications, 1962, 61-62, emphasis added.

¹¹*Harijan*, April 13, 1947, vol. XI, 104.

¹²*Harijan*, April 13, 1947, vol. XI, 104.

Today's scientists are also decisive in finding fault with the modern approach to life. The IPCC has clearly acknowledged that the developmental projects are the major cause of the climate change in the atmosphere. However, they seem to conceive the environmental values as distinct from and independent of moral values. But Gandhi lamented modernity because it was all set against the moral values of old. Accordingly, his eco-vision consists in seeing the environmental and the moral as one integrated whole.

This land of ours was once, we are told, the abode of the gods. It is not possible to conceive gods inhabiting a land which is made hideous by the smoke and the din of mill chimneys and factories and whose roadways are traversed by rushing engines, dragging numerous cars crowded with men who know not for the most part what they are after, who are often absent-minded, and whose tempers do not improve by being uncomfortably packed like sardines in boxes and finding themselves in the midst of utter strangers who would oust them if they could and whom they would, in their turn, oust similarly. I refer to these things because they are held to be symbolical of material progress. But they add not an atom to our happiness.¹³

Just because Gandhi objected to modern civilization it should not be misconstrued that he was objecting the benefits of modernity. What he insisted was that it was not spiritual enough as our tradition was. Hence, he said that while we try to modernize ourselves we should equally concentrate on the upkeep of spiritual values as well.

If India is to live and fulfil her spiritual mission among men, she must modernize itself... Let us unhesitatingly and energetically assimilate the modern industrial methods... But along with that we must practise spirituality intensely, create a mighty spiritual idealism in the mind of the nation and a great love for the country so that on the wings of them we may cross over the dark valley of modernism in which the west is sadly groping. Without spiritual idealism, modernism will spell a speedy ruin.¹⁴

People, like Jawaharlal Nehru, were keen on introducing massive development in India. They thought that the evils of mechanization were all

¹³Shriman Narayan, *The Selected Works of Mahatma Gandhi*, Ahmedabad: Navjivan Publishing House, 1968, 354-5.

¹⁴*Young India*, 25.7.1929, vol. XI, 244.

due to capitalism only. Hence, they thought of socialism as a remedy to it. Gandhi, however, argued against such a view: “Pandit Nehru wants industrialization, because he thinks that if it is socialized, it would be free from the evils of capitalism. My own view is that the evils inherent in industrialization and no amount of socialization can eradicate them.”¹⁵ Still others, dazzled by the grand success of modern machinery, wanted to go after the modernization process. However, Gandhi was very clear in his stand.

I refuse to be dazzled by the seeming triumphant of machinery and uncompromisingly against all destructive machinery. But simple tools and instruments and such machineries as saves individual labour and lightens the burdens of the millions of cottages, I should welcome.¹⁶

Gandhi clarified his position further thus:

What I object to, is the craze for machinery, not machinery as such. The craze is for what they call labour-saving machinery. Men go on ‘saving labour’, till thousands are without work and thrown on open streets to die of starvation. I want to save time and labour not for fraction of mankind but for all. I want the concentration of wealth not in the hands of a few, but in the hands of all. Today machinery merely helps a few to ride on the back of millions. The impetus behind this all is not that the philanthropy to save labour but greed. It is against this constitution of things that I am fighting with all my might.¹⁷

Further, in line with the scientists’ observation about pollution, Gandhi had something to say already during his time. Regarding pollution at the personal level, Gandhi said:

I can assist Nature, for instance, by getting rid of the effective cause of the impurity, so that more of it does not accumulate. That is to say, if I stop eating for the duration of the illness, thus preventing the ingress of further impurity; and if I exercise in fresh air, I shall also start ejecting the impurity through the skin. That this is the golden rule for keeping the body free of disease, every one can prove for himself.

¹⁵*Harijan*, September 29, 1949, vol. XIII, 299.

¹⁶*Young India*, 17.6.1926, vol. VIII, 218.

¹⁷*Young India*, 13.11.1924, vol. VI, 378.

Only, the mind must be kept in a stable state. One who reposes true faith in God will always act in this fashion.¹⁸

Gandhi also insisted upon avoiding pollution at the environmental level too: During my wanderings nothing has been so painful to me as to observe our insanitation throughout the length and breadth of the land. I do not believe in the use of force for carrying out reforms, but when I think of the time that must elapse before the ingrained habits of millions of people can be changed, I almost reconcile myself to compulsion in this the most important matter of insanitation. Several diseases can be directly traced to insanitation. Hookworm, for instance, is such a direct result. Not a single human being who observes the elementary principles of sanitation need suffer from hookworm. The disease is not even due to poverty. The only reason is gross ignorance of the first principles of sanitation.¹⁹

Summing up the present day position regarding industrial development, the world scientists' Report (IV IPCC-2007) has clearly established that whatever GHGs have been emitted over the past 100 years by Annex I countries are already affecting our lives now. It has further acknowledged that if there were to be more emissions to come from both Annex I and Annex II countries, it is bound to result in a catastrophe. So it calls for the reduction of GHG emissions.

But in reference to the question who bears how much of the responsibility for reducing GHG emissions, the UN framework has adopted in principle that the responsibility will have to be differentiated. The Stern Review Committee reiterates the view. Surprisingly, Gandhi spoke of Europe as having more responsibility for the malaise of industrial development as early as in 1925. After pointing out numerous civilizations such as those of Rome, Greece, Babylon, Egypt that perished because of their misdeeds, he forewarned Europe with a hopeful note:

It is good to have faith in the natural. I live because I have that faith... What may be hoped for is that Europe, on account of her fine and scientific intellect, will realize the obvious and retrace her steps and from the demoralizing industrialism, she will find a way out. It will not necessarily be a return to the old absolute simplicity. But it will

¹⁸M. K. Gandhi, *Collected Works of Gandhi*, New Delhi, Publication Division, Government of India, vol. XI, 435 (Henceforth the title will be abbreviated as *CWG*).

¹⁹*Young India*, 19.11.1925, vol. VII, 399.

have to be a re-organization in which village life will predominate and in which brute and material force will be subordinated to the spiritual force.²⁰

3.2. The Economic Development

The second major cause of today's environmental problems is the so-called economic development. In particular, the market economy is for the most part responsible for the over-exploitation of the Earth's energy resources. For, consumption of non-renewable mineral resources and fossil-fuel energy resources has been indispensable for economic development. Today we are in a position to recognize the eventual depletion of those resources as a real possibility. The advanced countries, which are consuming several times more resources per capita than the world average, must acknowledge their responsibility and clarify their intentions to convert their economic systems to minimize resource and energy consumption. Already during his time Gandhi thought that the inner mechanism of capitalism and its trend to exploit the natural resources would lead to globalization of approach which, in turn, would result in devastation of the global environment. Hence, Gandhi observed:

Industrialism is, I am afraid, going to be a curse for mankind. Exploitation of one nation by another cannot go on for all time. Industrialism depends entirely on your capacity to exploit on foreign market being opened to you, and on the absence of competitors. The future of industrialism is dark. England has got successful competitors in America, Japan, France and Germany. It has competitors in the handfuls of mills in India, and as there has been an awakening in India, even so, there will be an awakening in South Africa with its vastly richer resources – natural mineral and human ... and in the course of a few years the western nations may cease to find in Africa a dumping ground for their wares. And if the future of industrialism is dark for the West, would it not be darker still for India.²¹

Now we know for certain that capitalist economy in its garb of globalisation is, in fact, accelerating the process of denudation of nature. Nature has been a mother to us all along, giving whatever we need. But globalisation destroys the very mother just like the traditional farmer killing the very bird

²⁰*Young India*, 6.8.1925, vol. VII, 273.

²¹*Young India*, 12.11.1931, vol. XIII, 315.

which was giving the golden egg. That it is really so may be substantiated by enunciating inner dynamics of the market economy which lies in the law of supply and demand. There are two portions in the law of supply and demand. Both the laws actually enhance the selfishness deep down in the human, elating the selfishness of the producer as well as that of the buyer. It is, indeed, the enhancement of selfishness of humans that is the root cause of destruction of the Mother Nature. That this is so may be explained by analysing the functioning of the two portions of the same law.

First, the law of supply²² says that higher the price of goods the more will be the incentive to the producers to produce and supply in the market. Lower the price less will be incentive for the producer to make them available in the market. If the cost comes down the marketer would hoard up the goods and supply them less and less and waiting for an opportunity for the price to go up so that he could make a lot of profit.

Then, the implication of such a law, however, is that the value of goods is adequately signalled by the prices, not by their intrinsic worth. The goods are valuable, at least from the standpoint of the producer, not for their own sake but because of the price that producer would like to have. As a result, even the most necessary things for survival like air and water have become a marketable commodity. Almost every major culture considers as 'basic needs' only three things: food, clothing, and shelter. However, even a slight reflection reveals that they are not really the most basic needs for human survival. One can survive for several days without food, and many more days without clothing and shelter. What is fundamentally required for life are water and air. So, they are really the most basic needs. Without oxygen one can't live even for a few minutes. Still, if water and air are not included in the list of basic needs it is only because they have been provided by Nature bounteously and profusely. It is precisely these things that are being marketed today.

In other words, Nature is considered merely as a pool of resources for profit making business or simply as an object to be utilized by humans. Nature is no more regarded a well-designed system of which we are only a part. We are what we are only because we are part of the system as a whole. We are taking nourishment from Mother Nature. If we cut ourselves away from Mother Nature and are keen on making profits at the cost of the

²²For detailed analysis, one may usefully refer to A. Pushparajan, "The Market System Destructive of the Eco-system," *Theology for Our Times*, 4 January 1997, 69-71.

copious provisions of Nature, then we are rootless and ruthless. Therefore, we are going to be doomed. Nay, the devastating tsunami of December 2004 in the region of South East Asia, the numerous hurricanes, cyclones and floods that affected the USA and Europe repeatedly in the recent times are but a few instances of Nature's act of overhauling process. To put it in the words of Gandhi, "let them remember that nature is the finest physician. They may be sure that nature is repairing what man has damaged. Nature appears to have become powerless when man continuously hampers her. Then she sends death, her last and peremptory agent to destroy what is beyond repair, and provides a fresh garment for the wearer."²³ The many ecological disasters listed up in the first part of this paper are nothing but different facets of the doom that the market economy has led us to.

Secondly, the law of demand says: higher the price less will be the demand. To illustrate it, suppose a book is priced Rupees 500, only a few people are likely to buy it. But if the same thing is priced Rupees 70, many would buy it. Thus, it means: higher the price, less will be the goods demanded; lower the price more will be the goods demanded. However, no producer is going to sell his goods at a price lower than the real cost. But if the real cost of production is higher it is going to be less demanded by the people. This dilemma is solved by the market economy by introducing large scale production. By this process the producer is enabled to lower the price and, at the same time, to make a profit as well. Suppose the total cost of production for a single book is Rupees 100, including royalty, paper cost, printing cost, labour cost, travel cost, and transport cost, etc. Now, for producing 100 books, only the paper cost will be additional. The printing cost, time spent, the travel cost, transport cost, and royalty, etc., will be relatively the same. That is, the actual cost price of each copy of the book will be far less than the cost involved in producing a single book. It may be around just Rupees 30. That means the profit would be Rs. 40, if he fixes to sell a single copy of the book even at Rupees 70. Thus, mass production of books is the only way to reduce the price and at the same time make a profit for the producer. But, then, the implication is excessive exploitation of the natural resources. In case of fund resources like coal, petrol, and natural gas, nature is put on a stress because they are limited and non-renewable.

²³D. G. Tendulkar, *Mahatma*, New Delhi: Publication Division, Govt. of India, 1952, vol. IV, 20.

Thus, both the laws of market economy ultimately enhance the selfishness of people and make their wants appear as needs, which, in turn, lead people to indulgences, on the one hand, and excessive exploitation of natural resources, on the other. Hence, in Gandhi's opinion modern economic system is satanic. As against it, then, Gandhi proposes the traditional goal of voluntary poverty as only alternative to remedy the situation:

We notice that the mind is a restless bird; the more it gets the more it wants, and stills remains unsatisfied. The more we indulge our passions the more unbridled they become. Our ancestors, therefore, set a limit towards our indulgences... We have managed with the same kind of plough as existed thousands of years ago. We have retained the same kind of cottages that we had in former times, and our indigenous education remains the same as before ... not that our forefathers did not know how to invent machinery. They knew that, if we set our hearts after such things, we would become slaves and lose our moral fibre. They, therefore, after due deliberations decided that we should do only what we can do with our hands and feet. They saw that our real happiness and health consisted in a proper use of our hands and feet. They further reasoned that large cities were a snare and a useless encumbrance and that the people would not be happy in them, that there would be gang of thieves and robbers and prostitutions and vice flourishing in them and that poor men would be robbed by rich men. They were, therefore, satisfied with small villages... The common people lived independently and followed their agricultural occupations. They enjoyed true home rule.²⁴

The contemporary phase of economic development is obviously globalisation. It is nothing but an innocuous name for the hidden agenda of the Western nations compelling the developing nations to liberalize their policies, permit privatisation of business, even making structural adjustments, programmes unmindful of the havoc done to the global environment. This is, in other words, sheer exploitation of nations by nations. This is precisely what Gandhi predicted way back in 1931: "It is exploitation, I will not say, of the weaker nations by the stronger but of

²⁴M. K. Gandhi, *Hind Swaraj, India Home Rule*, Ahemadabad: Navajivan Publishing House, 1962, 61-62

sister nations by sister nations. My fundamental objection to machinery rests on the fact that it is the machinery that has enabled these nations to exploit others.”²⁵

4. Gandhi’s Positive Contributions to Eco-Vision

Apart from Gandhi’s critique of development as the root cause of ecological disaster, Gandhi is better known for his positive contributions to the sustainable development which, in turn, would go a long way to sustain the bio-health. We shall now turn to these methods conceived and practised by Gandhi for promoting a sustainable eco-vision.

4.1. Voluntary Reduction of Wants

Modern economics induces people to crave for artificial, luxurious, and pompous living. The very thrust of industrialization is to tempt people to indulge in multiplication of wants. Unless we are cautiously aware of this, we may fall prey to it. This is the core of Gandhi’s perception of the modern civilization. This is explained by J. B. Kripilani a close associate of Gandhi:

Nature has produced materials sufficient enough to meet man’s needs. But factory owners started exploiting nature in unnatural ways. Thereby they have created ‘illth’ in the place of ‘wealth’... When money becomes the motive for practising medicine, he is tempted to prolong his illness. The factory also does the same. Instead of meeting man’s wants, it multiplies them. It regards the people as children. Just as children throw away old toys when they see new ones, so also the factory-owners tempt the people to throw old articles and get new ones... If we crave for more things than needed, we become slaves of the factory. There is no happiness in slavery. Our troubles increase in the same proportion as our wants.²⁶

Granted the validity of this analysis, the only alternative to the malaise lies in voluntary reduction of wants. That is why Gandhi proposed the one-line environmental ethics: “The world has enough for everybody’s need, but not enough for one person’s greed.”²⁷ From this follows Gandhi’s insistence on simplicity of life:

²⁵*Young India*, 22.10.1931, vol. XIII, 318.

²⁶*Harijan*, 22.1.1950, vol. XIII, 407.

²⁷R. K. Prabhu, *Mohan-Mala* (A Gandhian Rosary), Ahmedabad: Navajivan Publishing House, 1949, 20-21.

Simplicity of life and the simplification of the machinery of living must be realized as a supremely essential condition of the coming of the new era. In the civilization of the future, an era of natural harmonious living will be inaugurated and artificial, luxurious and pompous living will be entirely rooted out. Simplicity of life being a condition of spiritual perfection, we may look forward to an era of civilization in the future, greatly superior to all the civilization of the past, if only we accept simplicity of life as the best method of living.²⁸

If we don't pay heed to it, Gandhi says, we become thieves in a way.

If I take anything that I do not need for my own immediate use and keep it, I steal it from somebody else. I venture to suggest that it is the fundamental law of Nature, without exception, that Nature provides enough for our wants from day to day, and if only everybody took enough for himself and nothing more, there would be no pauperism in this world, there would be no man dying of starvation in this world.²⁹

Lest we should fall into the category of thieves, Gandhi admonishes us to undergo voluntary poverty. This is so particularly in the Indian context.

In India, we have got three millions of people who have to be satisfied with one meal a day and that meal consisting of a chapatti containing no fat in it and a pinch of salt. You and I have no right to anything that we really have until these three millions are clothed and fed better. You and I, who ought to know better, must adjust our wants, and even undergo voluntary starvation in order that they may be nursed, fed and clothed.³⁰

Personally, Gandhi practised the principle of voluntary poverty so much so that the simplicity of his lifestyle became phenomenal. When he died, all his belongings were only so much as to be put in a brief case. There were three pairs of loin cloth, a pair of spectacles, a pair of sandals, a pocket watch, and a few other odds and ends. The worth of all these things at that time amounted to just Rupees 20.

²⁸*Harijan*, 20.4.1922, vol. IV, 197.

²⁹M. K. Gandhi, *From Yeravda Mandir*, Ahmedabad: Navajivan Publishing House, 1932, 13-15.

³⁰Shriman Narayan, *The Selected Works of Mahatma Gandhi*, New Delhi: Publication Division, Government of India, 1968, 385.

4.2. Appropriate Technology

Gandhi agreed with economists of the day that any concern with goods requires 'mass production'. However, his concern with the poor people necessitated him to emphasize 'production by the masses'. Simultaneously, on account of his concern with Nature, he insisted upon producing goods by utilizing the local resources and appropriate to the local environmental conditions. By way of illustration, Gandhi projected "*Charkha*" (spinning wheel) as the ideal appropriate technology devised at that time. If at all there is to be modern industrial development, it should supplement and reinforce the development of small-scale industries and agriculture in the hinterland, appropriate to the village environment:

If I can convert the country to my point of view, the social order of the future will be based predominantly on the *Charkha* and all it implies. It will include everything that promotes the wellbeing of the villagers. I do visualize electricity, ship-building, ironworks, machine-making and the like existing side by side with village handicrafts. But the order of dependence will be reversed. Hitherto, the industrialization has been so planned as to destroy the villages and the village crafts. In the state of the future it will subserve the villages and their crafts...³¹

Even with regard to production of crops, Gandhi insisted that it should be appropriate to the local conditions rather than hybrid varieties today.

The production of crops should be controlled keeping two considerations in mind. 1) The locality must try to produce its own food requirements and raw materials required for primary necessities of life in preference to commercial crops. 2) It must try to produce raw materials suitable for village industries rather than for factories.³²

Gandhi was aware of the acclaimed values of chemical manures. But he was clear that they were only temporary. But appropriate to the local environment, he insisted on organic manure. He warned them that trading in soil fertility for the sake of quick returns would prove to be a disastrous. It would result in virtual depletion of the soil.

³¹V. V. Bhatt, "The Development Problem, Strategy, and Technology Choice: *Sarvodaya* and Socialist Approaches in India," in *Appropriate Technology and Social Values-A critical Appraisal*, eds., F. A. Long and A. Oleson, Cambridge: MA Ballinger, 1980, 172.

³²*Harijan*, May 12, 1946, vol. X, 127.

We must replace what we take from the soil. The harvesting of crops leads to the impoverishment of the soil which should be replenished by cattle dung and by ploughing in of grasses. But chemical fertilizers affect the soil in much the same way as drugs affect the human body. They produce temporary exhilaration, and then there is relapse. Bumper crops are obtained but they cause new diseases and deficiencies in the soil... Chemical sprays affect the crops adversely and shorten considerably the life of the soil itself.³³

Among the Indian scholars who supported Gandhi's ideas of appropriate technology was John Cornelius Kumarappa. He had done his studies in economics in the London School of Economics and later went to the US to do his doctorate in Columbia University. After finishing his doctorate, when he came back to India, he was so much taken up by the ideas of Gandhi that he became a clear spokesman of Gandhian ideals in reference to economics. Gandhi was not a professional scholar. He was a visionary, a prophet. But J. C. Kumarappa, an ardent disciple of Gandhi, put the visions of his master in black and white and spoke for appropriate technology in a professional way. As against the showy economics of modernity, J. C. Kumarappa spoke of "Economy of Permanence." Just to illustrate it regarding issue of artificial manure versus organic, he says:

Just as the human system can be stimulated beyond its normal performance by drugs such as morphia, similarly plants also can be subjected to an unhealthy enhancement of their growth and production by the use of drugs. Chemical fertilizers can produce this effect, but it is an unhealthy, short-sighted and unnatural state of affairs.³⁴

Again, he says elsewhere:

Mineral fertilizers do not feed the land. They merely excite it to a certain extent like a stimulant and thereby it apparently increases production without a proportionate increase in the nutritive values, with the result that mineral fertilizers progressively deteriorate the health of animals and men as the food produced on fertilizers are not products of a soil that has been fed but one that has been merely stimulated.³⁵

³³*Harijan*, April 14, 1946, vol. X, 84.

³⁴*Harijan*, March 2, 1947, vol. XI, 41.

³⁵*Harijan*, April 10, 1949, vol. XIII, 41.

The many experiments that have been carried out show that the seeds and better still the leaves of plants fertilized with stable manure increase the capacity for disease resistance when fed to animals as compared with seeds and leaves of minerally fertilized plants, thus showing that the manures not only improve the soil structure but the consequence of manuring projects itself far into the animal kingdom reaching out to man himself.³⁶

There were several other scholars who also voiced Gandhi's concern for appropriate technology in the field of agriculture. N. R. Dhar, already during the life time of Gandhi, said thus:

As regards inorganic manures, the artificial manures like ammonium sulphate, ammonium nitrate, etc., which are likely to be manufactured in India, do not enrich the soil and increase soil fertility permanently. Most of these manures are lost as nitrogen gas without adding nitrogen to the soil. Hence, soils treated with such artificial manures may temporarily increase the crop yield but usually they deteriorate and their nitrogen content may fall off. On the other hand, organic manures like cow dung, farmyard manure, molasses, etc., when added to the fields, not only add to the nitrogen they contain but the soil is also enriched by the fixation of atmospheric nitrogen. The value of cow dung or molasses depends chiefly on its power to fix atmospheric nitrogen.³⁷

Prominent among the non-Indian economists who shared Gandhi's viewpoint was Ernst Friedrich "Fritz" Schumacher, who later played a key role in popularizing appropriate technology worldwide. It is significant that Schumacher called Gandhi 'the greatest economist of the 20th century'. No wonder then that he played a key role in popularizing appropriate technology worldwide.

4.3. Recycling of Resources

Today from the ecological point of view the secret of life is talked about as the law of recycling process. The same scientific law was explained from a common man's point of view by Gandhi and his economic spokesman J. C. Kumarappa as follows:

³⁶*Harijan*, April 10, 1949, vol. XIII, 42.

³⁷*Harijan*, August 17, 1947, vol. XIII, 279.

Few people realize that the quality of the health, growth and reproduction of plants, animals and human beings depend a great deal on the quality of manures that are fed to the soil. When we put manures into the soil, we are feeding the soil and to the extent the soils are fed the produce of the soil will also be nutritive, and the products of the soil will also be nutritive, and the products of the soil are usually the basis of the requirements of animals and men. The cycle is not complete here. If the soil produces good food for animals and men, that food when digested and returned back to the soil again, is also a better soil food, thus the circle of goodness goes round and round rising in a spiral for the benefit of plants, animals and human beings. There is an old saying, “who feeds well manures well.” We may put in a complement of this, “who manures well feeds well,” thus completing the whole process.³⁸

Gandhi would never like to waste anything. As against the ‘use and throw’ culture of today Gandhi would say: ‘Don’t throw away things’, rather recycle things as much as possible. Even a sheet of paper should be used carefully, according to him. He was known for writing his drafts in one-side papers only. Particularly, the postal envelopes in which he used to get letters were never thrown out. They would be unfolded and, then, straightened into a sheet of paper, that he could make use of the inner side of the envelopes for writings the drafts. As regards other things also he would never throw them away that easily. In fact, there was a pencil, which he used to have till it was only a stub. People said “Bapu, are you so poor I can give my pencil?” But Bapuji’s retort was: “I can still use it. Why then should I throw it away and get a new one from you?”

Gandhi was totally opposed to industrialization of agriculture. The reason was that it traded in soil-fertility for the sake of quick returns. That would prove to be disastrous and short-sighted, he said. On the contrary, the use of organic farming would enrich the soil. To that effect, therefore, everything should be recycled.

Except the skin and fat of the carcass, every other product and can be returned to earth as manure, which revitalizes it. The carcasses of small animals are straight away buried and become valuable as manure. If the carcasses without skin and fat are returned to soil, there is no loss economically, but instead, in an agricultural country like

³⁸*Harijan*, April 10, 1949, vol. XIII, 41.

ours, it seems such a burial of the carcass would be a valuable gain in replenishing the soil.³⁹

Gandhi said that the very life-growth consists in the recycling process only: The process of life depends as much as decay as on growth. Healthy growth can only take place when there has been proper decay of organic matter which becomes humus. This can only be brought about by the working of soil bacteria, reckless use of sulphate of ammonia, nitro-chalk, potash and other salts kills these bacteria, and so the plant cannot remain healthy when there is no humus in the soil.⁴⁰

That is why Gandhi was always in favour of burying whatever could be buried and thereby making it organic manure.

The bones are mostly wasted. They should be carefully collected and turned scientifically into manure. The entrails are utilized for gut, but there is room enough for improvement. The flesh should be saved from the filthy use it is turned to and must be made to yield fat, which will be valuable for manufacturing grease for factories. The remains should finally be converted into manure or buried deep.⁴¹

Again, if Gandhi was opposed to artificial chemical manure it was because it did not contribute to the recycling process.

4.4. Inter-relationship of Humans with Elements of Nature

Gandhi was always keen on making people realize that human being is only a part of nature. If any part of a system removes itself from the web of interrelationship with the whole, then it will be self-destructive. Hence, his insistence upon people building up a healthy relation with the whole Nature, with all its Elements: mother earth, rivers, air, plants, and animals.

4.4.1. Mother Earth

Gandhi says:

Walking and hiking, outdoor games of all sorts – playing them ourselves and not watching others play them – bicycling, swimming, gardening, digging in allotments, things that bring us once more into contact with Mother Earth, the Sun, the wind and even the rain, all these make for health more readily and more pleasantly than anything

³⁹*Harijan*, April 8, 1933, vol. I, 6.

⁴⁰*Harijan*, April 14, 1946, vol. X, 84,

⁴¹*Harijan*, March 18, 1933, vol. I, 3.

we do at the bidding of the drilling sergeant or the gymnasium instructor. “Exercise” would not be a bad slogan in this matter.⁴²

Even when an earthquake took place, Gandhi was not prepared to give up his firm belief in the harmonious functioning of the Mother Earth. If at all any such calamity takes place it is only because of our intrusions, not otherwise, he said:

I share the belief with the whole world – civilized and uncivilized – that calamities such as the Bihar one (earthquake) come to mankind as chastisement for their sins. When that conviction comes from the heart, people pray, repent and purify themselves. I have but a limited knowledge of His purpose. Such calamities are not a mere caprice of the Deity or Nature. They obey fixed laws as surely as the planets move in obedience to laws governing their movements. Only we do not know the laws governing these events and, therefore, call them calamities or disturbances.⁴³

Gandhi’s holistic vision made him discover an inner meaning for such happenings like an earthquake and as means for inner purification.

There is a divine purpose behind every physical calamity. That perfected science will one day be able to tell us beforehand when earthquake will occur, as it tells us today of eclipses, is quite possible. It will be another triumph of the human mind. But such triumph even indefinitely multiplied can bring about no purification of self without which nothing is of any value. I ask those who appreciate the necessity of inward purification to join the prayer that we may read the purpose of God behind such visitations, that they may humble us and prepare us to face our Maker. Whenever the call comes, and that we may be never ready to share the sufferings of our fellows whose ever they may be.⁴⁴

4.4.2. Rivers

Gandhi says:

We have more Ganges and Jamunas than the two. They remind us of the sacrifices we must make for the sake of the land we are living in. They remind us of the process of purification that we must

⁴²*Harijan*, September 30, 1939, vol. VII, 287.

⁴³*Harijan*, February 2, 1934, vol. II, 1.

⁴⁴*Harijan*, June 8, 1935, vol. III, 132.

continuously go through as the rivers themselves are going through from moment to moment. In the modern rush, the chief use we have for our rivers is to empty our gutters in them and to navigate our cargo vessels, and in the process make them dirtier still. We have no time to stroll down to these rivers, and in silent meditation listen to the message they murmur to us.⁴⁵

As to the duty of safeguarding the purity of water, Gandhi has this to say:

A sense of national or social sanitation is not a virtue among us. We may take a kind of a bath, but we do not mind dirtying the well or the tank or the river by whole side or in which we perform ablutions. I regard this defect as a great vice which is responsible for the disgraceful state of our villages and the sacred banks of the sacred rivers and for the diseases that spring from insanitation.⁴⁶

Gandhi was well-known for carefully maintaining the serenity and the cleanliness of the streams. Whenever he was in the Sabarmati Ashram, he would go to the river for ablution, but with a jug with him. He used to get into the ghat and draw water in the jug, come to the bank of the river and wash his face and hands only with the jug water. The reason he gave was that he had no right to pollute the clean water that was flowing in the river.

4.4.3. Air

Gandhi's comments are very interesting. By showing that it is very basic to life, he reminds us of the duty of not polluting it.

Man can live without food for several weeks, without water or sometime, but without air, he cannot live for more than a few minutes. God has, therefore, made air universally available. Shortages of food or water there may be at times but of air never. In spite of it we foolishly deprive ourselves of God's blessings of fresh and pure air by sleeping within doors with doors and windows shut... To get fresh air, one must sleep in the open. But it is no good sleeping in the open only to breath dust and dirt-laden air. The place where you sleep must be free from both. Some people cover their faces as a protection against dust and cold. It is a remedy worse than the disease... Anyone who

⁴⁵M. K. Gandhi, *Key to Health*, Ahmedabad: Navajivan Publishing House, 1948, 5.

⁴⁶*Young India*, 23.12.1926, vol. VIII, 16.

fouls the air by spitting about carelessly, throwing refuse and rubbish or otherwise dirtying the ground, sins against man and nature.⁴⁷

Gandhi was worried that modern civilization has put a price even for such an essential element.

Air is the most essential. Consequently, nature has provided it to such extent that we can have it at no cost. But modern civilization has put a price even on air. In these times, one has to go off to distant places to take the air, and this costs money... Whether air is free or has to be paid for, we cannot carry on without it for a moment. We have seen that blood circulates through the entire body, is purified after returning to the lungs and flows out again. This goes on all day and all night. Every time we breathe out, we expel fouled air, when we breathe in, we obtain, from the air without, oxygen with which to purify the blood. This respiration continues every moment and the life of our body depends upon it.⁴⁸

4.4.4. Plant Kingdom

Trees are living beings just like ourselves. They live and breathe, they feed and drink as we do and like us they need sleep... We should feel a more living bond between ourselves and the rest and animate creation.⁴⁹

I find in it a thing instinct with a deep pathos and poetic beauty. It symbolizes true reverence for the entire vegetable kingdom, which with its endless panorama of beautiful shapes and forms, declares to us as it were with a million tongues the greatness and glory of God.⁵⁰

Even from the utilitarian point of view, Gandhi said, we should cultivate respect to plants. We should not interfere with their laws of growth unduly.

J. C. Kumarappa explains it convincingly:

If our agricultural food production is to supply the normal requirements of the human body, the plants from which we draw that food must also be healthy, normal and well-fed. Any artificial stimulant or artificial feeding will naturally affect our food as we depend upon, especially in our country, so largely on plant life as

⁴⁷Gandhi, *CWG*, vol. 83, 315-16.

⁴⁸Gandhi, *CWG*, vol. XI, 453.

⁴⁹*Young India*, 5.12.1929, vol. XI, 395.

⁵⁰*Young India*, 26.9.1929, vol. XI, 320.

food. Hence it becomes imperative that we should watch the food given to these, the medicines administered and the drugs supplied. If there is any undue dose at any stage it will ultimately tell on the health conditions of the human being.⁵¹

There was a particular instance that took place in his life in Yerwada jail. One day Gandhi wanted a few neem leaves for medical purposes, to treat toothache. They were to be crushed and made into a paste and be applied to the teeth. One of his associates Kaka Kalelkar brought a twig of a neem tree. Gandhi was so pained at it that he reprimanded him, with almost tears in his eyes:

It was *himsa*. What was required is just three or four leaves. Why did you break a twig? Even the four leaves that you pluck from the tree, you must pluck with remorse of conscience. How could you break such a big twig from the tree? And that too at night, when it the tree rests, how would you dare disturb it?⁵²

Again, since Gandhi used to brush his teeth with a neem stick, Kaka Kalelkar brought everyday a new stick from the tree. When Gandhi noticed it, he objected to it: “We can use the same stick after cutting the used portion, also on the following day, till it is completely dry and becomes unusable.”⁵³ The reason he gave was that we have no right to take from the nature more than the necessary.

4.4.5. Animal Kingdom

Gandhi’s rapport with the animals was more intense. Once he said:

I do believe that all God’s creatures have the right to live as much as we have. Instead of prescribing the killing of the so-called injurious fellow-creatures of ours as a duty, if men of knowledge had devoted their gift to discovering ways of dealing with them, otherwise than by killing them, we would be living in a world befitting our status as man-animals endowed with reason and the power of choosing between good and evil, right and wrong, violence and non-violence, truth and untruth.⁵⁴

⁵¹*Harijan*, March 2, 1947, vol. XI, 41.

⁵²Kaka Kalelkar, “Gandhi’s Vision,” as retold by *Shri Gandhi and Lenin* [Tamil], 2nd edition, Madras: Star Publication, 1983, 59.

⁵³*Young India*, 5.12.1929 vol. XI, 395.

⁵⁴*Harijan*, January 9, 1937, vol. IV, 382.

Gandhi was sympathetic towards the minute creatures also:

Rats and fleas spread infection and the experts say that these have got to be exterminated. But rats and fleas are messengers of God. God speaks to us through them. In villages where nature has blessed you with the finest climate and healthiest soil, as I can see with my own eyes, you have so infringed nature's rules that plague seems to have come to stay. You may destroy some rats and fleas, while they have a knack of appearing again and again, if you do not make your houses and the surroundings inhospitable to them.⁵⁵

Gandhi wanted to establish relationship even with frightening creatures like the snakes. At one stage he was finding difficult to overcome the fear of snakes. He asked somebody to bring a snake and leave it into the hut where he was living. He let the snake to carry on its life with him in his own hut. For a month or so the snake was there just to get his fear removed from his heart. It is no wonder that he said we should not kill snakes just because of our common prejudice that they are all poisonous. "Since nine-tenths of snakes are non-poisonous and are valuable protectors of fields against rats, etc., it would be a good thing if a simple key for distinguishing poisonous from non-poisonous snakes can be had."⁵⁶ With all these sympathies for animal kingdom, it becomes much more understandable why Gandhi had a great respect for cow worship, as advocated by Hinduism. According to him, cow is "a symbol of the whole of animal kingdom." It "not only represents the cattle but also it is the mildest and the most beneficial of all creatures."⁵⁷ Hence, he supported popular worship of cow among the Hindu people.

4.5. Village Oriented Vision

Gandhi's broader vision of society was one that is based on a village set-up primarily, because it was based on an eco-vision. Today, in the West, there are very many people who go to the countryside and pitch their tents and start community life in the rural side. They have witnessed the dark side of city life and got bored with it. But, already at that time, Gandhi insisted upon a village setup. It was in defiance of the worldwide trend towards industrialization and urbanisation that Gandhi worked for renewal of

⁵⁵*Harijan*, January 9, 1937, vol. V, 382.

⁵⁶*Harijan*, August 17, 1935, vol. III, 215.

⁵⁷*Young India*, 8.6.1921, vol. III, 154.

villages. The city life, the urbanized, industrialised life is very dangerous for humanity, he forewarned. The reasons were both moral and ecological. The growth of cities and factories was possible only through a one-sided exploitation of the countryside.”⁵⁸ The blood of the villages is the cement with which the edifice of the cities is built. He wished to see the blood that is inflating the arteries of the cities runs once again in the blood vessels of the villages. How much did Gandhi wish that humankind returned to village life!

I feel that the country is heading for destruction, the speedier as the cities grow in size and number. My attempt to stop this exodus from villages is like the play of a child that holds a piece of straw in the falling waters of a cascade to stop the fall. But I like to indulge in that childish play.⁵⁹

Having witnessed that the process of mechanization was gripping the villages as a result of which the poor villagers were losing the precious use of hands for hard work, Gandhi expressed his deep grief:

The more I penetrate the villages, the greater is the shock delivered as I perceive the blank stare in the eyes of the villagers I meet. Having nothing else to do but to work as labourers side by side with the bullocks, they have become almost like them. It is a tragedy of the first magnitude that millions have ceased to use their hands as hands. Nature is revenging herself upon us with terrible effect for this criminal waste of the gift she has bestowed upon us human beings. We refuse to make full use of the gift. And it is the exquisite mechanism of the hands that among a few other things separates us from the beast millions of us use them merely as feet. The result is that she starves both the body and mind.⁶⁰

Even the use of machine and the consequent neglect of the peasants and the village artisans have caused pauperism. Therefore, instead of mass production through industrialization it is production by masses that is the true remedy, according to Gandhi.

But the criminal neglect of the peasants and the artisans has reduced us to pauperism, dullness and habitual idleness with her magnificent

⁵⁸*Young India*, 8.6.1921, vol. III, 154.

⁵⁹Mahadev H. Desai, *Day-to-Day with Gandhi*, Varanasi: Sarva Seva Sangh Prakashan, 1968, vol. 1, 145.

⁶⁰*Young India*, 17.2.1927, vol. IX, 52.

climates, lofty mountains, mighty rivers and an extensive seaboard, India has limitless resources, whose full exploitation in her villages should have prevented poverty and diseases. But the divorce of the intellect from body-labour has made of us perhaps the shortest-lived, most resourceless and most exploited nation on earth.⁶¹

Even Gandhi's interest in nature cure arose out of his eco-vision only. He was totally convinced of the fact that Nature has endowed us all with enough capacity for the resistance of disease. It is only when we are careless of her laws, we ruin that capacity. We have to regain it by healthy and hygienic ways of living and eating habits. He says:

I can assist Nature, for instance, by getting rid of the effective cause of the impurity, so that more of it does not accumulate. That is to say, if I stop eating for the duration of the illness, thus preventing the ingress of further impurity; and if I exercise in fresh air, I shall also start ejecting the impurity through the skin. That this is the golden rule for keeping the body free of disease, everyone can prove for himself. Only, the mind must be kept in a stable state. One who reposes true faith in God will always act in this fashion.⁶²

Again, looking at the quick and exploitative use of resources, granted that the energy resources are limited, it becomes an imperative that we use them only in a limited way. Here, Gandhi's emphasis on the beautiful dictum "renounce and enjoy" becomes really meaningful. It is actually the first verse of the *Upanishad*. You are allowed to enjoy the resource, nature but renounce. That means, make an act of faith that you are not the owner. I renounce at the feet of God and enjoy because I am given an opportunity to use it. When you have the attitude of renunciation and detachment, naturally, your act of enjoyment will be restricted only to the bare minimum.

5. Conclusion

Over the years in the recent past there has been a greater recognition of the ecological concerns. Efforts are on to make a difference in the post-industrialization phase and lifestyle changes or a mix of both. But, today, with the release of the Report of Intergovernmental Panel on Climate Change (IV), it is clear that there is almost unanimity of opinion among the

⁶¹*Harijan*, 7.9.1934, vol. II, 234.

⁶²Gandhi, *CWG*, vol. XI, 435.

world scientists and leaders of both the Annex I and Annex II countries regarding the impending disaster. They also agree upon the fact that the ecological challenges that affect us today are the result of the by-products of the massive industrialization of the Annex I countries over the past 100 years. With more emissions of the GHGs to come due to the developmental projects by the Annex II countries also, the whole biosphere is destined for catastrophe. Unless all the countries commit themselves to do whatever they can within their capabilities, and simultaneously look for ways of making their citizens make the right choices by seriously changing the options defined by their development policies, there is no future at all.⁶³

Against this background, people today find it their mission to put a break to the technological development and keep it within limits. It implies reduction of the use of fund resources and reliance on the renewable resources, reorientation of lifestyle in favour of simplicity, respectful dealing of Nature as a life-partner, natural resources management, pollution control measures, etc. In a word, an eco-vision is an ecological imperative.

The primary requirement of this imperative is that modern human beings ought to disabuse themselves of any wild vision of being able to subdue and conquer the nature as they like. Unless humankind learns to coexist harmoniously with the nature as a whole and with earth in particular, there is no future at all for survival of life. Accordingly, they have to be convinced that the development they have indulged in so far is no development at all and that the total amount of technological activity must be kept within the limit for solving our environmental problems.

It is precisely such an eco-vision that Gandhi cherished almost spontaneously, probably because of his religious bent of mind and spiritual outlook on Nature. Over and above, he was a perceptive thinker, voracious reader, and critical analyst. So, he could easily see the wrong direction in which the modern science was set. Hence there came up his prophetic denouncement of science, forewarning of the ecological catastrophe of the wild vision, and proclamation of the required eco-vision.

What interests us today is that Gandhi's eco-vision is backed up by scientific data. Ecology as a science has now established that Nature as a whole is a self-maintaining and self-replenishing system whose parts are interconnected and interdependent for the upkeep of the whole. Any system

⁶³Joyashree Roy, "Globally Warmed-Up Questions," *Indian Express* (New Delhi), 14.2.2007, 10.

will have all the parts intertwined. If one part falls apart then it creates a loophole there. That is, the whole is no more a system. In the same way, the whole natural setup, including human being, is a system. Even the humans are only a part of the system and, therefore, they have no right to cut themselves away from the nature-system. Insofar as they are part of nature, they will have to be conscious as a part of the whole system and deliberately be a part. Otherwise, it will be self-destructive.

From a functional/dynamic point of view, ecology has established that nature is like a living organism whose functions are so interactive that when only one of its parts is not functioning properly, the whole body will suffer. Human species is just one among the parts of the organism, that, too, a most fragile part and not the master of others parts of the organism. Nor can they consider Nature simply as an object. The approach of the modern sciences and technology was to consider the environment as a whole in terms of a material object. Earlier, people thought that they can tamper with it and exploit it as they like it. Scientists, however, have themselves agreed upon the 'limits to growth'. The so-called progress in terms of exploitative use of natural resources is not really growth. Since the Industrial Revolution, and our concomitant massive and growing consumption of mineral and energy resources, human activities have sometimes exceeded the limit of the local ecosystems, and are now threatening to overwhelm even the global ecosystem.

Further, the world scientists are coming out with undeniable evidences to establish that the rigorous structure of the system as well as the meticulous dynamism of this organism is spoiled because of the anti-Nature developments. Thus, they have contributed to the ecological imperative for sustainable development.

The real world-vision that will salvage the world from the ecological catastrophe is that which humbly accepts that humankind is only a part of a larger system which links human species to the environment, to past and present and future generations. It means further that we realize the outer limits of the biosphere, show due respect to all species of life, even establish deep communion with them, make use of natural resources frugally, and with responsibility to replenish the earth for what we take from it, enjoy things with detachment, leave for the future generations. In one word, "sustainable development" or "development through appropriate technology" is a key factor of the eco-vision.