Environmental Awareness in Jainism
CHAPTER – 1

ENVIRONMENT AND THE MAN

Introduction
1.1 Environment, Ecology and Eco-system
1.2 Environment – the Religious and Scientific Perspectives
1.3 Man as the Nucleus of Environmental Crisis
1.4 Environmental Crisis and the Focus prevailing
1.5 Environmental Crisis and the Focus needed to be
1.6 Relative Analysis of Causation and Co-existence
1.7 Scientific Concept and Spiritual Percept of Environment in Jainism
CHAPTER I

ENVIRONMENT AND THE MAN

Introduction

"Once six men lost their way in a forest. They tried to find their way out but failed. Hunger made them realise that finding food was their most immediate need. They came upon a tree whose boughs were heavy with fruits. One of the men, whom we'll just call number six said, "Let us cut down the tree and collect all the fruits. We may be stuck in the forest for a long time if we fail to find our way. So we'll need food." Number five broke in, "No, we'll just cut down all the branches which bear fruits." Number four said, "No, no. We'll just break off the twigs with fruits." Number three said, "No let us just pluck out all the fruits." Number two said, "Let us just pluck only the ripe fruits." And then number one spoke up: "Let us collect the fruits, which have fallen from the tree and are strewn all around it. They are enough to satisfy our hunger for now."¹

However number six overrode the rest of them and cut down the tree. The simple story above illustrates that indiscriminate exploitation of natural and human resources will inevitably result in crisis. Number six's example has been followed by innumerable people. And the consequence is for all of us to see — environmental crisis of monstrous magnitude that we are facing.

The need of the hour is protection and preservation of environment from further degradation. The focus of my thesis is not to evaluate environmental components scientifically or technologically. Nor am I interested in elevating Jainism in relation to other religions because Jainism itself is not for such a single-sided view. No man-found religion is complete without the knowledge of other religions. Moreover
the only inherent religion of mankind is compassion, love and coexistence and any preaching or practice in the name of religion that does not include the above aspects is not a religion at all. Religion misunderstood in practice and misinterpreted in the pretext of scientific temper is what exists today. It is time we seriously reflect on the words of Albert Einstein: "Science without religion is lame and religion without science is blind! Science can denature plutonium but it cannot denature the evil in the heart of man" in resolving the relationship between environment and man, and the environmental crisis. And Jainism is one such religion that establishes scientifically a deep inter-relationship between environment and man, and spiritually provides a framework to realise and live the same.

The relationship between man and environment has bewildered and fascinated mankind from times immemorial. Man has in turn, attempted to comprehend it through various means. Primitive man attributed supernatural qualities to elements of nature and thus raised superstitions that basically defined his relationship with his surroundings. In fact, superstitions, religions, science and philosophy have all come into being to grasp and explain the natural phenomena happening around man; furthermore these streams try to fathom and articulate man's relationship with his surroundings.

What is science and how does it contribute to our knowledge of the environment? Science is neither searching for a single coordinating factor nor probing the material structure of the universe using tools of chemical analysis or mathematics. Science is a systematic knowledge of reality that is deep, accurate and comprehensive. Science is the study of nature of reality as it is and from this point of view, it has analysed nature as uncreated and indestructible. However it states that while nature is indestructible, it is capable of modification — whether this is for the better or worse depends on the attitude and activities of man.
While science is analysis of the world as it is and not as man wants it to be, religion is not just a bundle of rituals or priest-temples or the respective heads of the religious organisations. Religion is nothing other than the basic principle of consciousness to live and let live. As the historian, Lynn White, observed “what people do about their ecology depends on what they think of themselves in relation to things around them.”

Science unlocks the secrets of nature rationally and thus establishes the reality. Philosophy helps in introspecting the self in relation to the reality of existence, his creation and environment. Religion in its true sense disciplines man to accept the reality and helps man to combine the scientific concept and religious percept to exist as impersonal self with personal involvement as an indispensable entity of the creation or environment. Understanding this is environmental awareness in the true sense, and not just analysing the pros and cons of the physical world.

Thus, “religion plays a significant role in ecological awareness and our attitude towards our surroundings” as stated by White. So, “one of the greatest challenges to contemporary religions is how to respond to environmental crisis. A crisis, which many believe we perpetuated by taking the erroneous roads of unrestrained materialism, secularism and industrialisation in contemporary societies, especially those arising in or influenced by the modern West. Indeed, the very division of religion from secular life, in the superficial sense, is the major cause for crisis.”

“Some medieval historians and Lynn White have cited religion’s negative role also in the crisis. White felt that the emphasis in Judaism and Christianity is on the transcendence of God above nature that leads to the devaluing of the natural world and a subsequent destruction of its resources for utilitarian ends. While the particulars of this argument
have been vehemently debated, it is increasingly clear that the environmental crisis and its perpetuation is due to industrialisation, secularisation and ethical indifference, which present a serious challenge to world's religions. This is especially true because many of the religions have traditionally been concerned with the path of personal salvation, which frequently emphasised the other world's goals and rejected this world's as corrupting.\textsuperscript{6}

“It is crucial that we introspect on how to adapt religious teachings to the task of revaluing nature so as to prevent its destruction; such an application highlights a significant new phase in religious thoughts.”\textsuperscript{7} As Thomas Berry has aptly pointed out, “what is necessary is the comprehensive re-evaluation of human-earth relation, if the human is to continue as a viable species on an increasingly degraded planet.”\textsuperscript{8}

“In addition to major economic and political changes, the situation calls for an examination of views and ethics of world's religions that differ from those of industrialised societies, which regard nature as a commodity to be utilised.”\textsuperscript{9}

Let us introspect on the prognoses of Lovelock and Mahatma Gandhi. “We don't pose much of a threat to the planet our threat is to our own civilisation, livestock and food crop that accompany it.”\textsuperscript{10} Similarly replacement of need by greed made Gandhiji caution the society: “The wealth of the world is sufficient to meet the need of every single man, but not enough to meet the greed of a single person.”\textsuperscript{11}

We clearly need to explore such comprehensive cosmological perspectives and communitarian environmental ethics as motivating factors in saving the natural world from further destruction. Natural world comprises man, his fellow beings and matter. But the advent of man on earth was much later to flora, fauna and matter. Till then, harmony and coexistence was the law of nature. Unity in diversity was
the principle of harmony; everything had a right to live and allowing others to live was the intrinsic principle of coexistence.

Just the advent of man on earth did not bring on a crisis; rather in the name of civilisation, modernisation and more so scientific advancement and economic liberalisation, man has led the world to the brink of crisis. "The scientific revolution at first moved in a different direction, exorcising the demonic powers from nature in order to reclaim it as an icon of divine reason manifest in natural law."^^ "But in the 17th and 18th centuries the more animist natural science that unified material and spiritual lost out to a strict dualism of transcendent intellect and dead matter. Nature was secularised. It was no longer the scene of a struggle between Christ and the Devil. Both divine and demonic spirits were driven out of it. In Cartesian dualism and Newtonian physics it becomes matter and motion, dead stuff moving obediently according to mathematical laws knowable to a new male elite of scientists. With no life or soul of its own, nature could be safely expropriated by this male elite and infinitely reconstructed to augment their wealth and power."^^

"In western society the application of science to technological control over nature marched side by side with colonialism. From the 16th to the 20th centuries, Western Europeans would appropriate the lands of the Americas, Asia, and Africa, and reduce their human populations to servitude. The wealth accrued by this vast expropriation of land and labour would fuel new levels of technological revolution, transforming material resources into new forms of energy and mechanical work, control of disease, increasing speed of communication, and travel. Western elites grew increasingly optimistic; imagining that this technological way of life gradually would conquer all problems of material scarcity and even push back the limits of
human mortality. The Christian dream of immortal blessedness, freed
from finite limits, was translated into scientific technological terms.\textsuperscript{14}

"The medical conquest of disease, lessening infant mortality, and
doubling the lifespan of the affluent, insufficiently matched by birth
limitation, especially among the poor, has created a population
explosion that is rapidly outrunning the food supply. Every year ten
million children die of malnutrition.\textsuperscript{15} "The gap between the rich and
poor, between the wealthy elites of the industrialised sector and the
impoverished masses, especially in the colonised continents of Latin
America, Asia, and Africa,\textsuperscript{16} grows ever wider.

"This western scientific, industrial revolution has been built on
injustice. It has been based on the takeover of the land, its agricultural,
metallic, and mineral wealth appropriated through the exploitation of
the labour of the indigenous people. This wealth has flowed back to
enrich the West, with some for the local elites, while the labouring
people these lands grow poorer. This system of global affluence, based
on exploitation of land and labour of the many for the benefit of the
few, with its high consumption of energy and waste, cannot be
expanded to include the poor without destroying the basis of life of the
planet itself. We are literally destroying the air, water and soil upon
which human life and planetary life depends.

In order to preserve the unjust monopoly on material resources
from the growing protests of the poor, the world must become more
and more militarised. Most nations are using the lion's share of their
state budgets for weapons, both to guard against each other and to
control their own poor. Weapons also become one of the major exports
of the wealthy nations to poor nations. Poor grow increasingly indebted
to wealthy nations while buying weapons to repress their own
impoverished masses. Population explosion, exhaustion of natural
resources, pollution, and states violence is the four horsemen of the new global apocalypse.

The critical question of both justice and survival is how to pull back from this disastrous course and remake our relation with each other and with the Earth.”

Human values and principles of coexistence and harmony have been replaced by dishonesty, selfishness, greed and lust. His evolution should have been the path from a ghostly beast to a godly being; but the irony is, it is traceable to a ghostly being. Man, the crown of creation endowed with cognitive aspects that distinguishes him from other animals, should have been the guiding force of nature. Unfortunately, his violent and materialistic self superseded his cognitive characteristics with the result that he has become the crown of destruction, the most corrupt and polluted creature on the earth. His physical world is polluted, social life is destructive, moral life is disastrous and ironically even spiritual life is in crisis. In a world with man as the crown of evolution and thus creation, environmental crisis has soared sky-high. Why did this happen? Have we failed to appreciate what environment, ecology and eco-system is to man or vice-versa? We have to ponder upon which takes precedence — whether it is environment and man or man and environment. Earlier, all that surrounded man was environment; today it is MAN who is surrounding everything. RESULT = all kinds of crisis.

To resolve the crisis, today, we do have innumerable policies, projects, laws and regulations to protect our environment and society. But as these laws and regulations increase, so does violence and pollution, because we are erring in our approach to the solution for the problems. Without targeting self-purity, no environmental sanctity can be achieved to restore harmony, coexistence and peace. And to realise this, we need religion of non-violence, compassion and peaceful
coexistence. And the religion should also have the principle of scientific vision, spiritual mission and religious consciousness. Of course, all religions have their own way of contributing to the welfare of mankind, but Jainism can contribute in a greater magnitude in understanding the environmental crisis under three unique scientific approaches: 1. The concept of God and the theory of Universe; 2. The Jaina ethics particularly *Aticāras* analysed under *Aṅuvrata*, *Guṇavratas* and *Śikṣavrata*; 3. Jaina doctrine of *Karma* Theory. Jaina religion itself is a religion of environment and thus philosophy of awareness to ecology is something that merits a special study. Because it outranks all existing policies and projects in its effectiveness. From this point of view, I put forward a practical and progressive analysis of environmental mission of Jainism without touching upon the other metaphysical aspects of Jainism and also without exhaustive comparative study with other religions. Focus is on the environmental awareness built-in as self-evolvement of a layman ranging from the Right faith, Right knowledge and Right conduct. Primarily, it is a religion of empirical world; transcendental aspects are the culmination of empirical living. Its emphasis on the empirical if imbibed practically roots out violent, hypocritical and aggressive characteristics and transforms man into a coexistent and non-violent being. Jainism as a religion of ecology stands out among all other religions for it is a way of life to co-exist.

However, before we analyse Jaina environmental philosophy, the knowledge of environment, ecology, ecosystems and a brief knowledge of the causes of crisis and effectiveness of existing solutions, is required.
1.1 Environment, Ecology And Ecosystem

"Long ago, there was a large forest fire, and all the animals of the forest fled and gathered around a lake, including elephants, deer, rabbits, squirrels, etc. For hours the animals crowded together in their small refuge, cowering from the fire. The leader of the elephant herd got an itch, and raised the leg to scratch him. A tiny rabbit quickly occupied the space vacated by the elephant's foot. The elephant, out of an overwhelming desire not to hurt the rabbit, stood on three legs for more than three days until the fire died down and the rabbit scampered off. By then, his leg was numb and he toppled over. Still retaining a pure mind and heart, the elephant died."

This is a Jaina parable that exemplifies that even animals, which are on a lower level of evolution than man, exhibit qualities of compassion for fellow beings and concern for environment. Man, despite his superior brain, is lacking in wisdom exhibited by animals. However primitive man did not look upon nature with indifference and arrogance. That is a modern attitude that developed gradually as man became more socialised and knowledgeable.

In the beginning of the world, there was harmony. The laws and rules of the nature guided every being on the earth. The primitive man, who was a wanderer too, lived in coexistence with nature and his fellow beings. Six thousand and five hundred years ago man learnt the art of cultivation of crops. He began to settle down and live in societies. Yet his needs were limited. However gradually the need was replaced by greed. The more civilised he became, the more selfish he grew. He exploited natural and human resources to satisfy his wants and hence qualities like violence, hatred, lust, acquisitiveness, etc began to replace humanitarian values like coexistence, compassion and non-violence.

The logical result of this erroneous attitude is evident in the environmental crisis of mind boggling magnitude we are facing at all
levels today — physical, economic, psychological, social, political, religious and spiritual. All these aspects are parts of the whole and should be studied in relation to each other.

Physical crisis is reflected in ozone depletion, drying up of lakes, scarcity of clean drinking water, deforestation, pollution, increase in the occurrence of natural calamities, global warming, spread of epidemic diseases, increase of non-cultivable lands, AIDS, soil erosion, etc. This is due to overexploitation of nature and man, by man.

On the socio-economic level, crisis is reflected as population explosion, economic and social inequalities, poverty, unemployment, unfair trade practices, discrimination based on caste, creed, gender, etc. These differences and conflicts arise due to adherence to false system of values that teach unhealthy competition and not coexistence. People are pursuing wealth, power, fame, etc at the cost of their fellow beings.

Psychologically, the rising number of suicides, chronic anxiety, depression, stress, mental illnesses, rising insecurities, etc are indications of the crisis. Individual dissatisfactions are collectively leading to wars, religious differences, etc.

Power struggles, corruption among leaders of the country, lack of concern for the welfare of the public, international border disputes, red tapeism, bribery, terrorism, etc are indications of political crisis. Politicians and bureaucrats, who have to serve the people, are channelling public's money for their personal uses. The richer nations are exploiting the vulnerabilities of weaker nations and their resources to gain more profits.

Religion, which is supposed to guide people on the right path, is being misinterpreted and has become a cause for wars and massacres. There are fights among the mankind over the differences in religions. Anti-nature rituals, performed in the name of religion and God, are
causing pollution and damage to the ecology. Worst of all is corruption, exploitation and inhuman attitude in the basic area of health, education and judiciary, is very unfortunate.

Man, who is ceaselessly pursuing materialistic goals is on the verge of a spiritual crisis. He is realising wealth, fame, power, lust, etc without realising that he has to exist for his environment, and not vice-versa.

All evidence points to one thing — lack of environmental awareness. If so, what is environment?

Environment

Amos H. Hawley defines environment as, “Whatever is external to and potentially or actually influential on a phenomenon under investigation, has no fixed content and must be defined anew for each different object of investigation.”

Marston Bates in his book, The Human Environment, has defined environment as “the aggregate of all the external conditions and influences affecting the life and development of an organism.”

“Every thing that surrounds man collectively forms the environment. The air we breathe, the soil we stand on, water we drink, the rivers, the mountains, the plants, the animals in short, all living and non-living things around man comprises the environment, which has influenced and shaped our lives since the time immemorial. It is literally the entity on which our entire agricultural and industrial produce depends on. The environment constitutes a life support system for all beings. Through a process of natural selection and elimination, it is the environment that has directed the evolution of the biosphere, as it exists today. The biosphere forms a thin crust of living beings over the surface of our planet and consists of an immense variety of organisms, out of which only one and an half million species have been identified. The
other components of the environment can be identified as atmosphere or the air, hydrosphere or the water, lithosphere or the rocks and soil; and man, the living component of the environment on the biosphere. The existence and well being of living organisms depend on a system of complex interactions within and in between the components of environment - the lithosphere, hydrosphere, atmosphere and the biosphere itself. These interactions satisfy the needs of all organisms for food, shelter, water, oxygen to respire, mates to reproduce, etc., that are essential for sustained life and continuation of species. Man evolved as one of the one and an half million species of the biosphere and he gradually created an environment of his own here.2\textsuperscript{21}

When we analyse man and environment, we should remember that environment encompasses physical, social-bio factors, and psychological, ethical, religious, political, scientific and spiritual aspects of man. In my thesis, I have used the word environment comprehensively to include all the above aspects, and not just the physical environment. Everything that surrounds man is collectively termed as the environment. However today the question is, is environment all that surrounds man, or that which man surrounds?

We see that the greatest problem arising out of interaction between organism and environment is that it is complex and confusing. Man has failed to understand the intricacies of this relationship in its totality.

Marson Bates has captured the essence of the interaction between man and his environment: "When we look at the human environment, the continuing interaction between organism and surroundings is very evident. It is often said that man far more than any other animal, has developed the ability to modify environment and thus to live under a wide range of physical and biological conditions. In fact man has created a new 'biome' on ecological formation. Man altered
landscape, which is rapidly replacing other terrestrial landscapes as forests are cleared, grasslands ploughed, and deserts irrigated. Man, assuming ecological dominance within this biome, has affected directly or indirectly all other organisms living there; he has become a new geological force."

"The question of relation between man in society and the geographical environment, in which he lives, is not of recent interest. Hippocrates (Fifth century B.C) wrote a treatise, 'On Airs, Waters, and Places,' which is considered to be the first expression of environmentalism." But knowledge and understanding of environment has gained increasing importance of late, because of the rapid depletion of natural resources (many of which are non-renewable) and chaos in all spheres of life. "In short, it is becoming increasingly clear that the ecological crisis is the greatest challenge facing the human community and indeed threatens the very survival of life on earth. Thomas Berry has suggested that it is necessary to become aware of the magnitude of the changes that are currently taking place." We have to introspect seriously on Berry's bleak questions: "Is the human a viable species on an endangered planet, along with the disturbing question, is the earth a viable planet with humans present? Man has reduced the world to this distressful state through his insatiable greed and non-coexistent approach. Berry alarms that the rescue of the Earth must be the key organising principle of civilisation from here on."25

If protection and preservation of the environment from further degradation by man has to be arrested, a thorough knowledge of relation between man and environment is a must to check the crisis. Understanding ecology and ecosystems gains significance in this context.
Ecology

"The term ecology, which has its root in the Greek word oikos (household or living place) came into use in the latter part of Nineteenth Century in the works of zoologists and botanists to describe the study of the ways in which organisms live in their environment. Ecology is the science that studies the inter-relationships of organisms with their environment. It is the management of the household of nature that embraces cultural, scientific, philosophical, theological and spiritual concerns. It should be understood as an inter-disciplinary science having an integral vision of nature, which is respected as the mother of all beings; its foundation is earth (prithvi) and its atmosphere."^26

"Though ecology is primarily a biological system in as much as it deals with the inter-relationships of organisms with their environment, in recent years, it has been contributing largely to the socio-economic and political policies of the world. We often come across the term ecology in socio-economic writings, newspapers and media. It plays an important role in understanding agriculture, conservation of soil, animals and plants, forests, water sources, etc. Ecology thus plays a vital role in human welfare. Consequently, ecological knowledge can provide answers to innumerable human problems."^27

To highlight the distinctly human and cultural aspects of the interaction between man and his environment, human and cultural ecology have come into being. "Social ecology is a combination of cultural and human ecology. Of late, it has gained more importance, as it would have inevitably because understanding of man's natural world without reference to social aspects is incomplete and distorted, which can in no way help to alleviate the ailments tormenting the mother earth. As mentioned earlier, man has not only biological requirements but also distinctly human needs that include social and cultural aspects."
Social interactions, kinship and family ties, religious beliefs, economical structure, political systems, etc form the subject matter of human ecology. Any ecological analysis studying the relation between man and his surroundings should take into account not only his biological characteristics, but also these social factors, because they affect man's behaviour greatly. Man has built cities; but the nature of the city or the urban environment governs his behaviour as the forest governs the behaviour of a squirrel. This amounts to human ecosystem. "Man's adaptations to his natural environment cannot be comprehended in purely biological terms, because all his activities are culturally conditioned. Culture embodies characteristic forms of collective self-expression as well as ideas and ideologies, which influence social life, whether religious or otherwise." Rituals, festivals, music, food habits, folklore, superstitions, etc are all a part of one's culture and influence man's attitude towards his environment.

Jainism brings all these three aspects, man, nature and environment, under the umbrella of coexistence with nature. The need to understand the living philosophy under Jainism is that human life is directly or indirectly related to ecology and thus, human problems are varied in nature. But the key to these problems, according to Jainism, lies in spiritual mission of environmental awareness.

Ecosystem

To understand environment and the related problems, ecology studies the ecosystems. "If ecology provides us the interrelationship of things in nature, ecosystem helps us in understanding the complex system in which interactions between the different components of environment occur. Ecosystem is any organised unit, which includes the living and the non-living constituents interacting with each other and producing an exchange of materials. Environment, biologically, is the
combination of factors and forces affecting the existence, growth and metabolism of organisms. Ecology is the study of animals and plants in their relation to each other and to their environment. Ecosystem is understanding of the complex system functioning among the different components of the environment i.e. between man, plants, animals and other components of nature like air, water, soil, energy, etc."^{30}

“All natural ecosystems have the capability to run and maintain themselves in a state of dynamic equilibrium automatically without any assistance from outside. For instance, a zone of natural forests, under a given set of climatic conditions grows and stands on its own for an indefinite length of time as long as there is no disturbance from the outside. It does not require any fertilisers, irrigation or energy input as man-made systems do. Sunlight is the only source of energy, which keeps natural ecosystem in a functional state. We can even draw a reasonable quantity of materials like firewood, timber, fruits and nuts, honey etc. without adversely affecting the balance of ecosystem. Self-sustainability is therefore, an intrinsic property of all natural and complete ecosystems. This quality has supported the existence of biosphere through millions of years. Unless damaged irreparably by unscrupulous human activity, the biosphere will continue to exist as long as the sun shines on our planet."^{31}

But the output through the natural ecosystem was too low to cater to the human population, which has risen phenomenally in the past few centuries. So man began to resort to intensive agricultural techniques sustained on large amounts of energy and material input. Forests and natural vegetation were and are being cleared up everyday to make way for more houses, croplands and industries.

“Systematic exploitation, modification and destruction of natural ecosystem began right from the time man began to live in a society. Primitive man was a nomad and had limited needs; but as man became
more civilised, his wants increased and he exploited (and is constantly exploiting) the natural ecosystem beyond its self-sustainability level, which resulted in the environmental crisis we are facing today.\textsuperscript{32}

Disasters like earthquakes, perennial floods, volcanic eruptions, spread of epidemics, depletion of ozone layer, hurricanes, etc are becoming more frequent even as man is becoming more technologically advanced. Though these disasters are termed as natural calamities, these are as much man-made as chemical accidents, wars and industrial disasters, because they are logical effects of his abuse of nature. Man who is born with nothing is leaving the world after contributing his share of pollution to it.

Whether it is the study of environment, ecology or ecosystem, it is ‘for the man and by the man’ and the fact that it is for his own benefit can never be ruled out. So, it is man who needs to be studied in a more comprehensive manner and not merely nature. This gave rise to a new branch of ecology that could help in understanding the living and non-living in their mutual interdependence and inter-relationship as well as their basic connection with the cosmos of nature. Ecosophy is this philosophical branch of ecology that offers a new perspective of human life.

The Jaina living philosophy, without pronouncing the terms like Environment, Ecology, Ecosystem or Ecosophy, stress on the “unity of nature, interdependence of earth and atmosphere, correlation of elements, regularity of species generation, convertibility of energies, checking the mutation of geo-biospheres, peaceful co-existence and life promoting co-operation. Jaina ecosophy bridges the gap between or links the natural ecology and human-cultural ecology.\textsuperscript{33}

The Jaina message is simple: it is not man and nature rather it is man with nature. If nature has to take its own course, it goes by natural
selection. But man's intervention has caused chaos in natural selection. So man, the thinking animal, should balance body and mind to maintain the balance in environment. The first step towards this harmony is dealt under the spiritual mission of Jaina Environmental awareness. Before dealing with this, in brief knowledge of world religions and scientific perspective of environment is inevitable.

1.2 Environment: Religious And Scientific Perspectives

"Nature is not something set apart as mountains, eagles, rivers and beings but something that runs through the fibre of each and everything. So it is human consciousness stressed to live in the environment."$^{34}$

Relation between natural environment and man cannot be studied in isolation, without reference to social, scientific and religious aspects. To maintain and promote harmony between man and nature, religious and scientific perspectives are inevitable.

"Concern for ecology is not a new development. Concern for ecology and fellow-beings are the leitmotifs of all religions. Though religions may differ with each other on finer points, no religion advocates realisation in isolation, rather through nature and fellow-beings. Every religion has and must deal with the existence of humans on earth with all its problems, enigmas and exigencies. Unfortunately more often, they concentrate on the spiritual dimensions. The material world is considered to be illusionary or just a temporary dwelling, from which one should gain liberation or salvation, with the result that it is delegated to a secondary place."$^{35}$

"All religions confess the cosmic order is God and God is cosmic order, and any violent attack on nature is not admitted by any religion. All religions attribute, in varying degrees of intensity, sacredness to
water, fire, air, mountains, rivers, trees, etc... and use them symbolically in their sacred scriptures as objects dear to God.\footnote{36} Man, in fact, realised the need for religion, science and philosophy to protect himself from giving in to his brutal side.

Scientifically, he is an evolved animal. Religiously, he is a man of conscience. Philosophically, he is a spiritual man. So, he is a superior creation of nature. His existence has to have two dimensions — intellectual and spiritual apart from the animal nature.

Are, scientific and religious, intellectual and spiritual views of nature opposed to each other? The answer is a resounding NO. Science states that nature is uncreated and indestructive. Principles of conservation of matter and energy are the two fundamental laws of physics. Science asserts that matter is permanent but the form varies. Whole nature is analysed comprehensively under the two postulates — Law of Causation and Law of Uniformity of nature. (Explained further under Pursuit of Scientific Vision and Spiritual Mission). Science does not accept metaphysical cause or the final cause. It takes into consideration only the sequential and developmental theory of cause. Nature left to it would have continued to exist in a state of orderliness and uniformity in diversity. There would be no irregularities or diversities in nature. Put simply, science has analysed nature as cosmos and not chaos. But man's intervention (cause) has damaged this self-sustainability and caused imbalance, which has led to devastation on a large scale (effect).

The reality is unity in diversity and its coexistence. From ecological point of view, this implies reverence for all — living and non-living. Reverence for planet Earth in order to save its integrity becomes our primary existential concern. We have forgotten that all the religions of the world originally advocated an intrinsic respect for nature. Below, I have just touched upon how nature was regarded by various religions.
"According to Vedānta or non-dualistic philosophy, environment is but an immediate dimension of self. Nature is inextricably bound up with the Hindu worshiping of his God, beginning with the greeting of the sun in the morning. He is aware of every nuance of nature, of the changing seasons and the changes brought on by his actions, etc. Bhāgavata, Purāṇa and Bhagavad-Gīta consider the whole of nature — rivers, air, trees, oceans, etc., as the body of the Virāt purusha, the cosmic person, and hence are sacred. Yajur Veda says that man should live with Suhrd-bhavēna saveshu (as a friend to all creation), a view that we share this earth and life on it with all creatures and life is easier when there is respect for each other and no greed.37

"Buddhism preaches compassionate empathy for all forms of life, particularly for all sentient species. The Dhammapada’s ethical injunction preaches not to do evil but to do well. Buddhism advocates the non-violent alleviation of suffering, an ideal embodied in the prayer of universal loving-kindness that concludes many Buddhist rituals: “May all beings be free from enmity; may all beings be free from injury; may all beings be free from suffering; may all beings be happy.” Out of concern for the total living environment, Buddha extended loving-kindness and compassion beyond people and animals to include plants and the earth itself. Buddhism has a great relevance to the protection of animal rights.”38 (Explained in more detail in the chapter on Ahimsā)

According to Quran, “Allah gave man the role of khalīfa (trustee). It is a role that each person must perform wisely and responsibly, fully aware of human accountability to the Almighty. ‘Do no mischief on the earth after it hath been set in order, but call on him with fear and longing in your hearts: for the Mercy of God is always near to those who do good’ (Q.7:56). Quran also states that the variety in creation points to the unity in the divine plan; and God gave mankind spiritual insight to understand nature and the principle of..."
balance is fundamental to that plan: "And the earth We have spread out like a carpet; set thereon mountains firm and immobile; and produced therein all kinds of things in due balance." (Q.15:19).

"All religions preach compassion towards other fellow beings, animals, plants, etc. In Bible, there is a reference to the wisdom of animals, birds and plants, that recognise the presence of divine spirit in nature and therefore respect it: "Ask the beasts to teach you, the birds of the air to tell you, the plants of the earth to instruct you, the fish of the sea to inform you who among them do not understand that behind all life is God's hand?"  

"Zoroastrianism perceives that a religion should not only respect four basics elements of nature — fire, air, water and earth, but also uplift them and ensure that they evolve and progress in such a manner that someday the earthly elements will merge with the elements of water and the water with the airy element, the air with fire elements. That is when the evolution of the earth will be complete. Zoroastrianism stresses the importance of these elements.

According to this religion, the nature provides us with fruits, vegetables and grains etc. The earth is also the repository of minerals and metals, which form the earth's core. Zoroastrianism states that care should be taken while utilising these gifts of nature. In Ancient Iran, people knew to what extent metal, minerals, etc could be removed from the earth and respected the limits set by the nature. For instance, unlike modern man who is unconcerned about the disastrous consequence of over-exploitation of mines, quarries and other gravities of the earth, the Zoroastrians of ancient Iran believed that if they crossed a certain limit they would invite ecological catastrophe. According to the Vendidad, it is heinous sin for Zoroastrians to bury the dead. Burials tantamount to polluting the earth with dead matter and virtually damaging the natural circuits of Spendarmad Amshaspand. Instead the consecrated Dakhmas
(towers of silence — structures for receiving and disposing of the dead bodies of Zoroastrians) with their three magnetic circuits immensely help and nourish functions of the above-mentioned Amshaspands. If a Zoroastrian is buried, the progressive work of Spenta Armaiti (the archangel, who presides over the visible earth and latent earth below it) suffers grievously and the damage done by the putrid flesh to the earth entails a big, extra burden on Spendarmad Amshaspand. The net result is that the person buried and those who aided and abetted the burial, will have to pay a very heavy price in nature, which will be reflected in the retribution they will get.”^41

Environmental catastrophe we are facing presently seems inexplicable. When all religions preach coexistence with nature and compassion for all beings, why then are the world in this dismal state? The tragedy is that often man has misinterpreted the religious texts to suit his requirements. Terrorists who are killing hundreds in the name of Islam have chosen to ignore the commandments in their holy text. It is militants have chosen to misinterpret religious texts to suit their convenience. Primitive man lived in coexistence with nature, animals and his fellow-beings. Even later, after the rise of civilised societies, our ancestors who were not as developed as we are, were human in coexistence and wiser in the use of natural resources because they realised that there can be no man without nature and fellow beings. They lived in coexistence with nature and made it a part of their religion, rituals and a way of life. Modern man however is ignoring his duties towards his environment in his pursuit of material comforts. He is arrogant and hypocritical in his treatment towards his surroundings. In the name of science and technology, he is overexploiting natural, animal and human resources.
We see that if properly analysed, the scientific and religious perspectives of nature are never contrary to each other, as we understand rather they are complementary to each other.

What we require is a religion that can combine both these perspectives. Such a synergy can be found under Jainism, which emphasises on man's responsibilities towards his environment and lays down directives for the preservation of nature. Mahāvīra focused mainly on crisis that would conquer self thus contributing to environmental crisis. Therefore he gave a code of conduct that anticipates the problems we may face and gives preventive measures to tackle it before they assume gargantuan proportions. It is time man came to terms with the reality that he is responsible for his surroundings and get into his role as the protector rather than the destroyer of earth.

1.3 Man: The Nucleus Of Environmental Crisis

"The shape of the future, says Dr. Radhakrishnan, gives us much concern. With all the resources at our command, with all the gifts that we have been endowed with, with all the powers that we have developed, we are unable to live in peace and safety. We have grown in knowledge and intelligence, but not in wisdom and virtue. For lack of the latter, things are interlocked in perpetual strife. No centre holds the world together the social pathos of the age is exploited by countless individuals in different parts of the world who pose as leaders and proclaim their foolishness as wisdom. We are sowing grain and weeds at random."\(^{42}\)

Our ancestors worshipped nature and its myriad manifestations; we, the modern generation, have the intelligence and knowledge to comprehend that there can be no man without nature. Yet, we find ourselves facing an environmental crisis of unbelievable magnitude. And who is responsible? All fingers point to MAN.
If nature has given man more than his share of power over all the other creations on earth, it also follows that he should fulfil his duties and obligations towards them first. Man has failed miserably in this, as explained in the previous section.

Today we talk about the depletion of the Ozone layer, rapid deforestation, population explosion, global pollution of all kinds, etc. on one hand and yet year after year in the name of development and progress we leave no stone unturned in annihilating the essence of life on earth. At best, we undertake stopgap remedies and myopic measures to alleviate our sufferings. But these are only palliatives and not remedies.

Most of world's religions believe that nature is God's creation. Our ancestors worshipped nature in its myriad forms — the sun, wind, rain, rivers, etc. However though people preached worshipping nature, they did not spare much thought to its preservation. And now they have begun to worship Gods who are enshrined in stone buildings. But what we need is not worshipping of nature, rather living with nature. The irony is, modern man is neither worshipping nor living with nature. Instead he is making the nature subservient to his greed and materialistic comforts. Hence, environment, at all levels, is in the midst of a crisis.

Scientific knowledge of environment has not served in preserving and protecting nature. Any finding under science is being used in a negative context than the positive. For instance, advances in nuclear sciences could have been used for constructive purposes, for the benefit of man. Instead, countries are making deadly nuclear weapons that could destroy the whole earth within no time.

Scientifically nature is understood to be orderly, based on the postulates of reasoning. Its components, namely atmosphere,
hydrosphere, lithosphere and biosphere, function in an orderly manner to serve each other in harmony. Science understands there can be no man without environment and anything affecting nature affects man. But even the scientific knowledge of this interdependence and knowledge of the crucial role HE NEEDS TO PLAY to maintain this harmony has not prevented man from exposing the world and all its creatures and resources to various kinds of life-threatening dangers.

Hazards and Risks

The natural systems, which sustain mankind, are degenerating at a fast rate while human population is rising rapidly. This is a sad state of affairs. Much of these changes are due to mankind's own activities. Something has to be done to reverse these damaging trends. Our inaction today could spell disaster tomorrow:

1. World population is increasing swiftly.
2. Stock of many vital resources are diminishing rapidly.
3. Deforestation has become an epidemic.
4. Biodiversity is declining rapidly.
5. Deserts are expanding.
6. Soils are degenerating at a fast rate.
7. Fish stocks are diminishing.
8. Wildlife habitats are disappearing.
9. Toxic poisons circulate from air, water, soil to food and our bio-accumulated up the food chain.
10. Accumulation of green house gases threatens to change climatic systems.

25
Anything affecting nature has resulted from man. And anything affecting nature will definitely affect man. Primitive man stood in awe of natural phenomena like storms, hurricanes, etc but gradually he learnt to live in harmony with his environment. He was a wanderer and took from nature only enough to satisfy his limited needs — food, shelter and firewood. But as societies grew, so did man's greed. Over the last three hundred years, there have been widespread and rapid technological and scientific developments that now dominate our lives. These advancements made our lives easier, but also gave rise to anti-nature attitudes. For example, "the Industrial Revolution in the Eighteenth century began with the search for more efficient means of utilising natural mineral resources, particularly metals. In Western Europe the smelting of iron was made possible by using timber from the extensive forests for charcoal production." Thus began indiscriminate cutting down of trees and overexploitation of natural resources to satisfy men's endless wants.

Man should wake up and realise the existing situation, for which he alone is responsible. Nature left to her, would have remained the same — abundant forest areas, plateaus, deserts, valleys, clear rivers, streams and lakes. Every living creature would have had its own share of resources as per the law of nature. But it is an irony that the rational aspect of man has contributed in making him the self-centred creature he is today. If all the available land is converted into farmlands, houses and industries to serve man, there won't be any space left for flora, fauna and for natural resources.

Man is born with nothing of his own, is leaving the world after contributing more than his share of impurity to it. He should understand the law of nature — that all beings are connected at some level in the circle of life. Man is failing to comprehend this. He is killing animals for food, sport and other purposes like furs, perfumes, leather,
The philosophy of creation is that every being, however small or big, exists for a reason; and life of every being is dependent on others, directly or indirectly. Coexistence and harmony among beings should be a rule, not an exception.

Statistics reveal that disasters occurring today are increasing in frequency and are of greater intensity than earlier. The question then is — Will man attempt to prevent future disasters or allow the situation to worsen? Gujarat earthquake, though it is a natural disaster, was aggravated due to man's lack of foresight and concern. Lack of proper infrastructure and inferior building materials increased the damage caused by the earthquake. And lack of concern for human lives exhibited by the politicians has resulted in people living in inhuman conditions in so-called relief camps even today.

We should also be aware of the damage done by man in the name of scientific research and providing quality life. "Due to space probe, CFC's in refrigeration etc, the ozone layer is getting depleted. Whenever a rocket is fired into space, 75 to 120 tons of chlorine is dumped into the atmosphere. In the year 1980, 500 rockets and spaces shuttles were sent up. In the year 1990, 1,500 rockets were sent up. This has released 1,50,000 tons of chlorine. Each molecule of chlorine settles into the stratosphere and remains there for twenty years. Each molecule of chlorine converts O₃ to O, this is why the ozone depletion is occurring. In spite of this, innumerable rockets are launched. Is it necessary to launch so many rockets when the threat is so great when the earth's atmosphere is being constantly and deliberately disturbed.

Another classic example of disaster wrought by man due to greed and sheer thoughtlessness. "The story of Madagascar runs like a fairy tale — a utopian land, unadulterated by human intervention and modern evils, which suddenly turned into a tale of horror. The story goes like this: The island of Madagascar lies off the coast of Africa. In
Madagascar, local people as robe of the ancestors know forest. The spirits of the ancestors are believed to live in the forest. The forest represents something eternal for the people there because it has provided them fresh water, protection from the sun, and medicines through centuries. Today, the protective robe is worn and tattered. Once covered in forests, Madagascar is now only forests remnants. About ten per cent, of what was once a forest, remains. It is one of the world's major environmental disaster areas. This ecological disaster has contributed to an economic disaster; soil erosion and silted rivers now threaten the sources of livelihood of the people. For millions of years, the wildlife — plants and animals on the island evolved in splendid isolation. There are hundreds of species of both on this island, which cannot be found in any other part of the world. However, in the last eight hundred years, after humans found their way into the island, ninety per cent of rain forests and a large number of animal species have become extinct. Human expansion and overexploitation and poor management of natural resources reduced this treasure house of flora and fauna into an ecological tragedy. Today a small group of dedicated biologists and environmentalists are struggling to reverse the process of destruction, but the result is negligible."

From the above example it is necessary to understand the intricacies of the ecosystem and respect its limits. However, man is failing to do so. More knowledge he acquires, the more self-centred and corrupt he becomes. Individuals who have to protect the country from enemy forces and corruption are corrupt themselves. They are amassing wealth in an illegitimate manner; who is going to correct them? Deforestation, killing animals, cheating fellowmen, draining of lakes, exploitation, and atrocities over non-renewable resources, etc. are all typical examples of existence of man at the cost of others. Just organising seminars and symposiums cannot put things in their right
place. But even an iota of insight into the meaning of existence can restore nature to its original glory.

People have to realise that with each tree they unthinkingly cut down, with each hill they drill through to make roads, with each animal they hunt down for pleasure, with each machine gun and bomb they produce — with each step, they are courting disaster. So let us reflect on the prophetic words of Mahāvīra: "One who has got victory over one's own self is greater than the one who conquerors thousand and thousand of warriors."47

In recent years, there is an increasing awareness of environmental degradation. Countries have formulated hundreds of policies, laws and regulations to reverse the process of ecological disaster. But the irony is that man overlooks a treasure house of ecological wisdom that is inherent in religions like Jainism analysis the problem from its roots and prevents any further crisis. Instead he undertakes stopgap remedies that cannot provide sustainable solution to the varied and complex problems of an ailing mother earth. But before understanding what ought to be done for a sustainable solution, one should have a functional knowledge of what steps are presently being taken to resolve the crisis, which is dealt with, in the next section.

1.4 Environmental Crisis and the Focus: Prevailing

"Attachment and aversion are two evils which lead the self to commit sinful acts. The self which resists them does not suffer from worldly sojourn."48 This "attachment and aversion are the root causes of karma and karma originates from delusion, and delusion is the root cause of misery."49

"There is a spectacular growth in public consciousness about forms of environmental degradation in the world. With an amazing
rapidity this awareness is being translated on the one hand into substantial media coverage and on the other hand into the creation of new government department concerned with different aspects of environmental management. Government programmes are innumerable and increasing in number day by day. Environmental science as a subject is gaining momentum in the curriculum. A number of informative documentaries on the preservation of natural resources are being made and telecast. We have national and international legal policies to preserve and protect the environment that include forestation, restoration of lakes, recycling wastes, garbage disposal, etc. But the question is whether any of these are being implemented in reality. The UN conference on the human environment spreads knowing consciousness about the environment, but not the living. Particularly in the Third World countries environmental and developmental crisis are intensifying and interacting to reinforce each other.

But what is interesting, is that, "many environmental problems, especially those related to air and water pollution, have become less severe in many parts of the industrialised world because of the introduction of capital, intensive pollution-control technology. But these problems have continued to grow and worsen in many parts of developing world. In other words, while the economic development process is worsening the environmental problems of the developing countries, it appears to be solving them in the West. However, this notion is quite deceptive because the West too has its share of ecological problems; they are just different from those faced by the developing countries of the East.

In the West, the major environmental problems are those of waste disposal, the disposal of highly toxic, and industrial and nuclear wastes. Problems of acid rains have definitely increased. But in the Third World countries, though waste disposal problems contribute to
environmental crisis, they are not major problems. The major problems are misuse of the natural resource base, soils, forests and water resources.\textsuperscript{51}

In India, on one hand there doesn't seem to be an end to the problems of inequality, poverty and unemployment — the crucial problems the developmental process is meant to solve. On the other hand, environmental destruction is accelerating.

Let us introspect, has scientific knowledge helped in alleviating this problem?

a) Scientific technology for environmental conservation and protection

Human activity generates a tremendous amount of waste materials. These are discharged in various components of the environment in which they bring about undesirable changes. The phenomenon is termed as environmental pollution. It has been defined as an undesirable change in physical, chemical or biological characteristics of air, water, land, etc that will be or may be harmful to human and other life, industrial process, living conditions and cultural assets or cause wastage of our raw material resources.

Deterioration of environment has been taking place all around us. Pollution of water, air, soils and the foods we eat has created a definite public health hazard, which usually causes slow development of chronic and non-specific symptoms of toxicity. At times, these materials in the biosphere pose a serious problem. The physical aspects of environmental pollution have been treated with scientific technology. Major kinds of pollution we are facing are air pollution, water pollution, terrestrial pollution, noise pollution, radiation pollution and industrial pollution.
Let us see how technology has helped in checking pollution. Various steps have been adopted to control air pollution — domestic fires have been replaced by smokeless chullahs, electric stove, construction of scientifically designed houses for recirculation of air, systematic implementation of forestation programme, etc. Water pollution can be treated to a certain extent by stabilisation of ecosystem, re-utilisation and recycling of waste, removal of pollutants in water by absorbents, electro dialysis, ion exchange, reverse cosmoses, chemical procedures, etc. Soil pollution can be scientifically checked with agro chemicals, which must, however, be used with care. Integrated pest control method, use of organic manure, treatment of effluents, provision of adequate sanitation facilities, etc also check pollution. Creation of green belt along roadsides, use of silencers in motor vehicles, industries, etc. can control noise pollution. Nuclear reactors, industrial wastes, hydroelectric power plant, thermal power plant, etc. are causing pollution and adding to the environmental crisis. Nuclear reactors should be properly operated and maintained to avoid accidental leakages. Treatment of industrial wastes, recycling processes, stringent safety measures to safeguard man, machine and material should be implemented.

"Technology has helped us in treating sewerage. It also helps in eliminating toxic metals and chemicals. It also aids in checking another major threat to life on earth — depletion of the Ozone layer. Scientists have discovered that certain alkenes are capable of capturing chlorine radicals responsible for Ozone depletion from CFCs (chloro fluro carbons)."52

Thus, with growing environmental crisis, need for environmental protection is growing too. Humans are using science and
technology to combat the crisis. While technology has come in handy in protection of the physical aspects of the environment why then the pollution is on the increase? Because it has been treating only the symptoms, and not the cause. What is required is a spiritual mission to coexist with nature rather than conquering nature or exploiting it. If this coexistent philosophy is not imbibed, scientific technology will fail in preventing further crisis. So let us see if our environmental education helps in imbibing this ecological concern.

b) Environmental education and the environmentalists

Today environmental education has gained a prominent place in our education system. Along with that, the need for environmentalists is growing too. Environmental science, environmental engineering, environmental awareness programmes etc. are finding a place in the curriculum. Environmental education is the process of creating awareness regarding environmental issues, which may range from the appreciation of nature to understanding the vital importance of conservation and evolving methods for sustainable development, methods of conservation, alternative source of energies. However, the knowledge accumulated from books and classrooms must be applied in real life if crisis is to be resolved, isn’t it? Let us see whether environmental policies and management have helped in spreading environmental awareness and eco-friendly practices.

c) Environmental management, policies and projects

Environmental management means treating the symptoms and not the cause. Appreciation of the gravity of the environmental problems and related issues will certainly slow further
environmental degradation. It is a human trait to act when faced with a crisis. Until then, we choose to ignore the issue. For example, with the growth of population rate in India, don't we have the vision to foresee either food problem or traffic congestion? Do we need management policies to deal with this problem?

"One of the major problems people are facing world over is that of pollution as mentioned earlier. Primarily, sustained pollution threatens the sustainability of life everywhere, not only now, but in the long run also. The West blames the developing countries of the East for the increasing pollution. They claim that they have clean air, high standards of living, etc. Hence, the Third World is responsible for pollution. They say that if pollution is to be controlled on a global scale, the poor countries must rise to the situation and the West will magnanimously extend support. Thus, the Third World countries are expected to control pollution with the help from Bruntland Commission, set up for that purpose. This may sound reasonable, but it exists on paper alone, and has not been implemented."

"In the Rio conference on environment in 1992, the resolution was taken for "Clean Up" on a global scale. The clean up costs were to be shared equally by the West and the East. But the World Bank, Global Environment Facility did not meet out similar treatment to the East and the West. According to the resolution, developing countries have to pay for the patented technology. Consequentially, the burden on the developing countries will be severe."

In the past few decades, in India, the stress has been on development; but the process ran parallel to the lack of awareness and concern for ecology. "The colonial rule in India and the free India in the post-independent period focussed on industrialisation to compete with
the developed countries. Historian Ramachandra Guha calls this long period of independence as Ecological Innocence.\textsuperscript{55}

"Among the hundreds of voluntary groups working at the micro level within India, there has been a remarkable growth of interest in environmental problems. So rapid, in fact, that we sometimes tend to describe this growth - albeit loosely - as the beginnings of an environmental movement."\textsuperscript{56} "There are today hundreds of grassroots groups in the country and world involved in environmental issues, and their experiences and interests are extremely diverse: some are interested in preventing deforestation, while others are only interested in forestation. There are many, which want to prevent the construction of one dam or another, while there are others who want to prevent water pollution."\textsuperscript{57}

"Many other organisations have been making sincere efforts to raise the awareness levels in the country and change anti-environment policies of the government. But such isolated efforts cannot succeed in preserving the environment. There are many adverse forces working against their cause and undoing their achievements. In India for instance, huge stretches of forests in the Northeast were cut down for the establishment of the tea plantations. Excessive fishing on the Indian coasts, and on the coasts of almost all South-East Asian countries is induced by the heavy demand for prawns in western and Japanese markets. This overexploitation and disturbance of the marine resources will affect the whole food chain and damage the environment. Moreover, the environmentalists who campaign publicly for environmental causes should live the eco-ethical values in their day-to-day personal lives too. Mahatma Gandhi, for instance, though he did not claim to be an environmentalist, showed deep concern for ecology."\textsuperscript{58}
"Recently Indonesia banned the operation of trawlers from its coastal waters and several countries including India have set up regulations to prevent trawler operators from fishing in the first few kilometres from the coast. This zone is reserved for the traditional fisher folk. But policing trawlers over such an extensive coastline is an expensive proposition and regulations are, therefore, seldom observed and enforced because of which there is friction between traditional fisher folk and trawler owners. Though there is a law banning deep-sea fishing, how far man is inclined to follow this, is an ever-debatable issue. And media news that hypes governmental policies should also be accepted with a pinch of salt."

"Another instance is that of the export of frog legs to cater to the palates of western consumers. This led to a rise in the pest population and consequently crop harvest was affected. The moral: main cause of environment destruction is the demand for natural resources fuelled by the consumption habits of the rich — nations, individuals or groups. Their monstrous appetite and the wastes they generate contribute largely to the global pollution load."

Any business without ethics is crime; business without social concern is a greater crime. No discussion on pollution is complete without a reference to business practices of today and the paucity of ethics in it. Nature has well-defined laws; every being on earth has its own ethics and limits. Man is interfering in the natural order of things and violating these limits to satisfy his greed. For instance, there are umpteen animal protection laws to prevent cruelty or killing of animals. However these have failed miserably in stopping man’s inhuman treatment towards animals. Just one visit to a zoo or a circus will reveal the monstrous conditions animals live in — tiny crammed cages with no space to move about, unhygienic conditions, insufficient food and lighting, cruel methods to train and tame the animals, etc, and similar
treatment to pet animals show that man with all his superior intelligence is more barbaric than the animals. In western countries, though animals are given all facilities like healthy food, shelter, air, light, water, etc, they are still under captivity and are reared in unnatural conditions. Man is again doing this to serve his own ulterior motives.

Today economic or business considerations have pushed ethics and respect for natural resources to the background. Man knows the price of everything, value of nothing. "Addressing the difficult question of how we can value resources, Hawkens and Louis argue that, assigning monetary value to natural capital is not feasible for three reasons. One, many of the services we receive from living systems have no known substitute at any price. For example, oxygen production by green plant. Secondly, valuing natural capital is an imprecise and difficult exercise at best. Thirdly, just as technology cannot replace the planet's life support systems, so too are machines unable to provide a substitute for human intelligence, knowledge, wisdom, organizational abilities and culture. While there may never be a right way to value a forest, a river or a child, the wrong way is to give it no value at all. If there are doubts about how to value a seven-hundred-year-old time, ask how much it would cost to make a new one."

The modern man places profit before welfare and life of other human beings. For instance, children below the age of twelve were hired to work in a tobacco company. They had to wear company T-shirts and distribute cigarette samples freely to public. They were paid Rs.5 per week. Slowly these children themselves began to smoke. And thus began a life-long habit, which is physically and economically detrimental. Today, because of misleading advertisements, a girl feels a cigarette between her lips signifies freedom. For a boy, the message
conveyed is that it is macho to smoke. Advertisements brainwash the youth and hook them to this dangerous habit.

There is no dearth of environmental policies and laws designed to control degeneration. But the government never properly implements the environmental laws passed by the legislature. For instance, polluting industries like leather processing, were moved out of Delhi to the suburbs. But moving out will not solve the problem because pollution as a whole has to be dealt with, not just pollution in Delhi. Politicians and bureaucrats have failed in controlling pollution because of their vested interests. This is proving to be a moral and an economic hazard.

Currently, more focus is on management of the environment, or whatever is left of it. Management includes every aspect of protection and prevention of nature from further pollution. Scientific technology, projects and policies at political level, international conferences, summits, and environmental education and awareness is the focus of the day. The reasons for environmental crisis are touched upon in management policies. But these policies treat just the symptoms and not the cause.

Just laws cannot change the state of things; whether it is water, air, energy or physical resources like land, rivers, plants, animals, etc; what we need is not just management policies, but rather living principles, which should guide man. There is no point in having environmental management institutions, policies and projects without imbibing man with environmental consciousness.

The following sections outline the philosophy and the course of action that are conducive to environmental conservation.
1.5 Environmental Crisis and the Focus: Need to be

"If the entire universe belongs to you and all its treasures are yours, they still can neither satisfy your craving nor do they have the capacity to give you shelter."\(^6^2\)

"The environment is not just pretty trees and tigers, endangered plants and ecosystems — it is literally the entity on which we all subsist, and on which our entire agricultural and industrial development and, thus, life depends. Development can take place at the cost of the environment only up to a point: beyond that point it will be like the foolish man who was trying to cut the very branch on which he was sitting. Development without a concern for the environment can only be development for the short-term. In the long term, it can only be anti-development and it can continue only at the cost of enormous human suffering, increased poverty and oppression. Countries like India are rapidly approaching that point.\(^6^3\)

Normally environmental issues are discussed and resolved either in five star hotels or at national and international summits. Or they remain on the files in government offices.

But the irony is that the cause of environmental pollution is at the nodule of the root system and we are treating the flowers and hoping to solve the problem. Such a superficial approach can perhaps provide a temporary relief; but we need to get to the root of the problem to seek a sustainable solution to environmental crisis. Environmental crisis is not just pollution of water, air and light. It is not just the turmoil in the system; it is rather the crisis at an individual level. The crisis in the individual is leading to all kinds of pollution which includes corruption, red tapism, poverty, overexploitation of natural and human resources, population explosion, atrocities on women, terrorism, power struggles, economic domination, social superiority intellectual atrocities, religious conflicts, etc.
So, we do not need religious sermons, preaching, laws, regulations or even punishments. Environmental management policies and laws, too, cannot provide a sustainable solution to the crisis. What we need is awakening, introspection and reformation of the Self.

Modern man has only listed the following philosophy of coexistence:

1) Need for equitable distribution of resources
2) Preservation of environment by equality
3) Quality of economic growth
4) Equality in the use of resources.
5) New technologies to resolve the environmental crisis.
6) Economic and ecological development based on the concept of need.
7) Emerging field of environmental accounting
8) Management of price and value
9) Clarion call for the less use of depletable energy sources
10) Search for alternate source of energy
11) Required limited energy to be consumed by industries and Transportation.
12) Incorporating environmental concerns
13) Empowering local governments and people.
14) Need for local management of forest resources.
15) Respect for all fellow beings and matter.⁶⁴

The tragedy is that modern man has focused on the respect for all fellow beings and matter in the end, as an afterthought, but Jainism says that without imbibing this philosophy at the outset, the
other fourteen ecological measures will be futile, as is evident from the
catastrophes we are witnessing today.

Simply put, Jaina environmental awareness involves balancing
human needs and protecting natural and cultural heritage for the future
generations to come through the process of self restraint. The motto
should not be ‘I lived’ rather ‘we live and we shall all live’. The principle,
live on other or ‘living by killing’ is self-contradictory. “The principle of
equality propounds that everyone has the right to live. The directive
principle of living is not ‘Living on other’ or ‘Living by killing’ but ‘Living
with other’ or ‘Live for others’ (Parasparopagrahojīvanām).”

Can any environmental management policy or law answer this
need? No. More than two decades ago Thomas Berry anticipated such
an exploration when he called for “creating a new consciousness of the
multiform religious traditions of humankind as a means toward renewal
of the human spirit in addressing the urgent problems of contemporary
society.” “Tu Weiming has written of the need to go ‘Beyond the
Enlightenment Mentality’ in exploring the spiritual resources of the
global community to meet the challenge of the ecological crisis.”
Thomas Berry suggest that we have become autistic in our interactions
with the natural world. In other words we are unable to value the life
and beauty of nature. Because we locked in our own egocentric
perspectives and short sited needs. He suggests we need a new
cosmology, cultural coding and spiritual and ethical motivating energy
to overcome the deprivation.”

What we require is a religion that has a scientific vision and a
spiritual mission to respect and preserve ecology. While all the religions
can direct us in this, Jainism can provide positive insights and practical
living philosophy for conservation of environment. The philosophy of
Jaina spirituality, which is based on conservation of energy and
environment, will help us tackle the role of human in relation to his natural world and resolve the present crisis.

The daily prayer of a Jaina includes the following verse that constantly reminds him of universal love and brotherhood, which are of lasting human value: “O Lord, grant me ever and anon affection towards all beings, joyful-respect towards the virtuous compassion and sympathy for the afflicted and tolerance towards the perverted and the ill-behaved.”

Mahāvīra preached that every being — living or non-living has a right to exist and that man must respect this principle, failing which self has to face the unique theory of *karma* propounded in Jainism. *Karma* theory targets basically greed, anger, pride, deceit, which result in influx of *Karma* that brings suffering to the individual and thus environmental chaos. The causal theory in Jainism analyses cause and effect as equal and reciprocal. This is what we find even in our scientific theory that every event has a cause and there is an equal and opposite reaction to action. Mahāvīra’s message is Man alone has to reverse the reaction to redeem of his *Karmas* and thus suffering.

“Jainism, thus, provides a sustainable solution to ecological crisis because it is not just a religion with abstract concepts; it is a practical, positive and rational way of life. It teaches how a man can live in coexistence with his surroundings. Jaina ethics is not the privilege of select few, but for each and every individual irrespective of caste, creed, gender, age, nationality, language, etc.”

Jainism inculcates awareness in such a way that one develops respectful coexistence of *Jīva* (living) with *Aṇīva* (non-living) through *Aṇuvratas* or small vows, *guṇavrata* and *Śīkṣavrata*. These vows guide the individual to condition, control and conquer self from all emotional factors. By giving *Aṇuvratas* for householders, Mahāvīra has made every
one responsible for his environment. No doubt, scientific knowledge that makes us sensitive to ecological issues but emphasises on causation rather than coexistence. In Jainism causation is subservient to coexistence. Compassion and coexistence is the central philosophy of Jainism.

Does the focus on causation alone obstruct us in finding a viable solution to the crisis?

1.6 Relative Analysis of Causation and Co-Existence

"What you desire for yourself desire for others too; what you do not desire for yourself, do not desire for others too. As it would be unto thee, so it is with him whom thou intend to kill. As it would be unto thee, so it is with him whom thou intend to tyrannise over. As it would be unto thee, so it is with him whom thou intend to torment, in the same way whom thou intend to punish, unto drive away. The righteous man who lives upto these sentiments, does therefore neither cause violence nor cause others to violence."\(^7\) This is an inherent philosophy of coexistence of Jainism.

No doubt mankind as a whole has been alerted towards the crisis in the environment. But the irony is we are focusing more on causation, than the philosophy of coexistence. Causation only analyses blood as a composition of haemoglobin, RBC, WBC and other blood cells; as living cells that keep the body warm and functional. Coexistence goes one step beyond this and understands blood as emotion, affection, mutual concern, compassion, etc. Causation can only analyse the crisis. Hence, coexistence should be supplemented by causation.

Today environmental crisis is analysed with respect to causation, i.e., how it has happened and what is the remedy. But it does not focus
on who is responsible for the disasters occurring. For instance, let us take the social crisis existing in the society. Is this due to the very creation itself or due to man-created society? In India, even after fifty-five years of independence, a village has remained a village as far as the basic amenities are concerned; there is further deterioration in its physical and socio-economic conditions. In the name of development, urban environment is contributing to degradation on all levels. We blame our fate for this deterioration, but we don't condemn the political administration, which is the actual culprit. We need socio-spiritual administration and not politico administration. If renewable resources are used wisely and non-renewable resources are preserved, then we are preserved. If fertility of the soil is maintained judiciously, then it will feed the mankind forever. But a country driven by power hungry politicians and corrupt bureaucrats is more inclined to device schemes to misuse nature, animal and manpower for their own personal benefits. Such a system can never lead us towards a better environment; the situation is inevitably going to proceed from bad to worse.

We are concentrating on ecology unrelated to sociology. However, coexistence is the order of nature. We find unity in diversity and not unity and diversity. This requires study of ecology not only as a biological science, but also from a sociological point of view. For social ecology to be functional, community should be imbued with the vision of Ecosophy. Ecosophy is the philosophical branch of nature, as mentioned earlier. It must play an important role in directing the place of human within nature so that a culture of domination may be replaced by culture of participation and stewardship.

We don't need more theories to understand the causation of the environmental crisis. The two postulates of science, law of causation and law of uniformity of nature have explained the critical environment surrounding man. We need a socio-religious-scientific analysis of co-
existence between man and his surroundings. Man should rid himself of the notion that he is the most significant creature on the earth. But more often man is under the impression that everything exists for him and he has to exist for himself. Christopher Key Chapple in the book, Ecological Prospects, "confesses that part of the existing confusion arises due to our western vision of reality focussing almost exclusively on the primacy of humans as the crowning point of evolution over and above other beings — animals, plants, matter, etc. In western religious traditions, the relationship of humans with the divine has dominated all else. The earth and its myriad species are secondary to the significance of human beings." \(^{72}\)

Man is the nucleus of the crisis and he alone can check and resolve the crisis. All these observations point to one thing: What we need today is the understanding of causation and coexistence, commitment of the self he accountability of the community with a vision of Ecosophy to environmental conservation, which is the central theme of Jaina ethics.

"It is no longer that we are here and the system is there. We have to do something about it, so let us devise a strategy that may solve the problem. It is rather that we are part of something that has to be transformed, because it is wrong, and since I share the responsibility for what is wrong there is nothing that can stop me from starting the process by transforming myself." \(^{73}\)

"First a horizon has to be discovered. And for this we have to find hope — against all the odds of what the new order pretends and perpetrates. Hope, however, is an act of faith and has to be sustained by other concrete actions. For example, the action of approach, of measuring distances and walking towards. This will lead to collaborations that deny discontinuity. The act of resistance means not only refusing to accept the absurdity of the world-picture offered us, but
also denouncing it. And when hell is denounced from within, it ceases to be hell."\textsuperscript{74}

Denouncing such hell from within and realising the non-violent self is the essence of Jaina philosophy. Religions of the world do include preaching on non-violence and coexistence. But \textit{Ahimsā} (non-violence) and \textit{Aparigraha} (non-possession) is the very heart of Jainism. Jaina tradition is equipped with individual ethical practices for preserving life and nature that are necessary to combat the global environmental degradation. It is the religion of kindness and positive attitude towards life. Modern man has neglected these aspects and has courted disaster. Unlike other religions, Jainism is a religion for and of the common man. Jainism more than a religion it is a śramana culture. It is based on equality of existence. Jainism propounds progressive theory of \textit{karma} that envelops both scientific and spiritual aspects. The life is structured practically analysed in Jainism with scientific vision and spiritual mission. It has a master principle ecosophy to live and let live. As everything in nature maintains its existence, Jainism inducts man to realise his nature of existence to have a coherent environment with his fellow beings and matter.

1.7 \textbf{Scientific Concepts and spiritual percept of environment in Jainism}

In the absence of soul, "knowledge is non-existent and in the absence of knowledge, the soul is unsubstantial."\textsuperscript{75}

"This world of ours is dynamic, not static, it is ever-changing and progressing in a forward or a backward direction. Like the spokes of a wheel the rise and the fall, follow in succession. Jain Ācāryas have divided the cycle of time into \textit{Utsarpini} and \textit{Avasarpini}, i.e., the time rising and falling with a slow serpentine motion. The rise of the sun to
the zenith and its fall again every evening is teaching this great lesson of Nature. The great civilizations of Rome, Greece and Babylonia, which rose to the highest point of glory and are now non-existent, are illustrations in point. The early history of modern science shows that the great scientists like Galileo and Bruno had in their search for knowledge to face insults and suffer tortures that the hands of the blind custodians of religions. The times have changed and the present is an age of steam, electricity and electronics. The very section of society who had done its best to check the development of scientific ideas is now anxious to verify the principles of its religions in the light of modern investigations.”

“Science may be defined as the ‘promotion of natural knowledge’, ‘the pursuit of truth’, or ‘the systematic investigation of the world before us’ and its claim to be regarded as such is based on the method which it employs for the search of knowledge. The first step is to ascertain the facts connected with the problem by experimental investigation, for Science recognises no authority other than Nature. The next is to classify the facts in order that their significance may be better appreciated. The third essential step is the formulation of a theory or principle to explain the facts because science is emphatically not a catalogue of facts but an attempt to fit them into a rational scheme. It is expected of a theory or a principle that is shall be capable of experimental verification and shall lead to a search for new facts. Thus, the journey is continued ever onwards into new realms of knowledge. The characteristic feature of this method is that it is constantly in touch with experimental facts and that is why science can justly claim to be the pursuit of truth.” In the light of this Jainism as a religion of Environment, is analysed.

Scientific vision is the knowledge of the reality; spiritual mission is living the reality. Today, we have no dearth for knowing the reality;
unfortunately, we are not living the reality. Jainism is a religion that literally inducts man to live the reality through a practical code of conduct. Scientific vision of Jainism dictates that we reconsider our relationship with nature through practice of _Anuvratas_ and _Anekāntavāda_, and develop a human-spiritual-earth relation and not divine-human or human-human relation. We should make it our spiritual mission to revalue nature everyday so as to prevent its destruction. Even a casual observation shows that Jaina perception of nature is as scientific as scientific knowledge itself.

Science analyses nature inclusive of man under two postulates — Law of uniformity of nature and Law of causation. If man has to survive, he has to have healthy environment. Thus he should save the environment. This is the Law of Causation. In a world rid from all sorts of pollution and crisis, he can reap the benefits of environmental purity. This enlightens the man with a scientific vision — if nature has to be free from crisis, it is he who should be free from crisis. That is the Law of uniformity of nature. Science divides everything under two categories of living and non-living. It says that nature is uncreated and indestructible, but matter and living beings undergo transformation, modification and decay. Jainism also analysed nature in the same plane long before modern scientific theories were developed. But the unique feature of Jainism that distinguishes it from scientific knowledge is its concept of _Kārmic_ matter, which causes in modification and decay. _Kārmic_ matter is nothing other than the anti-nature attitude of man, which causes primarily _Karma_ to self and chaos in nature.

Science has analysed nature as cosmos, not chaos. The chaos is the result of attitude of man towards nature. What we are experiencing today is total chaos — from resource depletion and species extinction to pollution overload, the planet is struggling under unprecedented attacks. This is aggravated by population explosion and indiscriminate
industrialisation. Science comprises in tracing the cause and effect of any phenomenon. We have to recognise that cause, man and his greed, has resulted in the effect, environmental crisis.

"This crisis has political, social and economic dimensions. According to the Global 2000 Report, once such global environmental problems are set in motion, they are difficult to reverse. In fact, few, if any, of the problems in the Global 2000 Report are amenable to quick technological or policy fixes. Rather they are mixed with the world's most perplexing social and economic problems." \(^{78}\) Scientifically, it is high time we give a rethink to worldviews and ethics. It is also a spiritual and moral crisis which, in order to be addressed, will require broader philosophical and religious understandings of ourselves as creations of nature, embedded in life cycles and dependent on ecosystems. We need a philosophy of religion in the light of environmental crisis. A religion should give basic interpretive stories of who we are, what nature is and where we have come from and where we are going.

The question then is what type of religion can respond to the environment crisis. "Judaism, Christianity and Islam have created dominantly human-focused philosophies. They preach transcendence of God above nature. Hinduism considers nature and its various manifestations like wind, sun, rain, etc to be sacred. However, Hinduism believes the motive for creation of the universe is for the Lila or sport of the Brahman or God." \(^{79}\)

Jainism gains importance in this context for it is not only a religion of environment, but also a religion of non-violence, and believes that living or dead, bonded or liberated, is in coexistence with environment. Scientifically, today, we have understood that it is not just the advent of man on earth that has caused all crises; rather his concept of civilisation, industrialisation and modernisation, and of course finally
liberalisation that has led to all kinds of unhealthy diversities. So it logically follows from this, that it is man who has to be targeted to resolve this crisis, rather than his external environment. This is the rationale we find in the scientific weapon, namely, Anuvratas propounded by Mahāvīra, that target man’s aggressive, exploitative and violent self to transform him into a compassionate, non-violent and coexistent being, and thus lays the foundation for a society free from insecurity and fear of violence of all kinds. In Sūtrakrtānga, it is clearly mentioned “there is nothing higher than the sense of security, which a human being can give to others.” The virtue of fearlessness is supreme. It is two-fold: firstly, one should not fear from others and secondly, one should not cause fear to others. A real Jaina is one who is free from fear and enmity.

Lord Mahāvīra has proclaimed that “there are weapons superior to each other, but there is nothing superior to asastra or disarmament.” At the root of all types of conflicts, exploitation and violence, there lies the feeling of discontentment, as well as the will for power and possession. Jaina thinkers have all the time condemned and encountered this through the spiritual weapons of Ahimsā, Anekāntavāda and Aparigraha to fight the self-inflicted with such Kārmic matter. In uttarādhayayana, “it is said if you want to fight, fight against your passions; it is much better to fight with one’s own passionate self than to fight with others. If someone is to be conquered, it is no other than your own self. One, who has got victory over one’s own self, is greater than one who conquers thousands and thousands of warriors.”

Jainism recognises that every being has a right to exist; it captures the whole essence of philosophy of reverence for everything on the earth. The greatness of Mahāvīra lies in the fact that he realised the
importance of preservation of environment two thousand six hundred years ago.

The following chapter explores why Jainism is particularly suited to deal with the environmental degradation we are confronting at all levels; Jainism combines scientific approach and spiritual mission to provide positive and practical answers to resolve the contemporary problems we are facing today.

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