



# Belief of Jainisam towards Enviornment and Natural Resource Management

**Dr Swati Ranbhor-Munot**

**Abstract-** Enviornment is not merely the atmosphere and other physical factors surrounding us but is the complex of all factors which not only affects one organism one time, but all organism all the time. In a larger sense, enviornment constitutes the various physical, mental, social, spiritual, educational, economic and intellectual aspects of whole humanity and when kept healthy and inspiring, it promotes the progress and development of mankind. The whole world today is deeply concerned over the issues of ecology and environment. Right from a common man in the street up to the universal orgnisation like U.N.O. and the top most leaders of all nations talk about the measures to be taken for saving the world from a disastrous catastrophe that is definitely going to happen, if adequate measures are not taken in time. The discussions at numerous international meets and conferences echo the same concern, but so far only a little hope for avoiding this disaster has emerged. It seems that so far little attention is paid to the spiritualistic measures which were suggested in the millennia old wisdom expressed in the sutrasmaxims and aphorisms-found in the vast Jain literature. These sutras are basically the expressions of universal truths realised through intuitional insight developed by spiritual practices. The metaphysical doctrine of the existence of soul as a real substance is the base of the spiritualistic philosophy of Jainism. According to this doctrine, the objects like earth, water, fire, air and vegetation, which appear to be inanimate, are actually possessed of the soul, that is, they are all. This research paper introduces the contribution of Jain philosophy towards enviornment and natural resource management through its belief and application of it through day today routine of life.

**KeyWords-** Jainisam Philosophy, Enviornment Managemnt, Natural Resource Management.

**Introduction-** Since time immemorial man has been and will always be exploiting nature without taking in to consideration of enviornmental detoriation. In fact, the so called progress, in reality, is disturbing the enviornmental balance seriously, leading to breakdown of life support system on the earth. The toughless exploitation is mainly due to the ignorance about enviornment and ecosystem, lack of concern amongst planners and ecologist about the side effects of developmental projects, gap in information and in training personal, absense of multidisiplanary approach to developmental projects and lack of systematic information, data and feddback system. This calls for making proper enviornmental strategies for maintanining the ecological balance not only for making preservation of nature an integral part of developmental planning, but also by adopting alternative means of livelihood for those dependent upon nature for survival.

The enviornmental ethics or Dharma of ecology teaches us how to treat nature. It includes cultures and traditions that have influenced human relationship with nature, the place of man in nature, rights and duties of individuals, the moral standings of humans and duties of future generations. The basic principales underlying enviornmental ethics or Dharma of ecology are described as follows.

1. Protection of renewable natural resources.
2. Conservation of non- renewable resources.
3. Optimum resource use by nations.
4. Avoid consumerism.
5. Adopt sustainability as a way of life.
6. Joining environment and economics to eradicate poverty.
7. Link environment with peace and security.

There is an urgent need to treat the entire world as Global family that is Vasudhaiva kutumbakam. Man should not try to conquer nature but work with it in close harmony.

What is Jainism- Along with Hinduism and Buddhism Jainism is one of the three most ancient Indian religious traditions still in existence and an integral part of South Asian religious belief and practice. While often employing concepts shared with Hinduism and Buddhism, the result of a common cultural and linguistic background, the Jain tradition must be regarded as an independent phenomenon rather than as a Hindu sect or a Buddhist heresy, as some earlier Western scholars believed.

The name *Jainism* derives from the Sanskrit verb *ji*, “to conquer.” It refers to the ascetic battle that, it is believed, Jain renunciants (monks and nuns) must fight against the passions and bodily senses to gain enlightenment, or omniscience and purity of soul. The most illustrious of those few individuals who have achieved enlightenment are called Jina (literally, “Conqueror”), and the tradition’s monastic and lay adherents are called Jain (“Follower of the Conquerors”), or Jaina. This term came to replace a more ancient designation Nirgrantha (“Bondless”), originally applied to renunciants only.

Jainism has been confined largely to India, although the recent migration of Indians to other, predominantly English-speaking countries has spread its practice to many Commonwealth nations and to the United Nations. Precise statistics are not available, but it is estimated that there are more than six million Jains, the vast majority of whom live in India.

### Belief of Jainism towards Environment and Natural Resource Management.

**Belief of Equality-** Jainism stands unique in assigning equal status, same as that of human beings, to all constituents of environment. The main constituents, most important life supporting natural resources, earth (soil, minerals etc.), water, energy (fire), air and plants are as much living beings as human beings and should be considered and treated as such. This will eliminate possibility of harm to them. In day today practice “In view of composite holistic nature of the universe, consider the world, all its constituents as one's own self”. They consider, “The life forms are of six types - earth forms, water forms, energy forms, air forms, plant forms and all higher forms from microbes to animals and human beings.” “Those who know one substance completely know all substance completely and those who know all substance completely know one substance also completely”. Even Jains consider Earth-forms, water-forms, energy-forms (fire), air-forms; plant-forms and all higher form from two senses to five sense organising are living beings like us (human beings). This illustrates the natural phenomenon of interdependence, mutuality, oneness and cohesion of all the myriad constituents of nature.

The principle and belief of equality as established and ordained in Jainism is fundamental for protection and preservation of environment. If all constituents of environment earth, water, air, fire, plants and all other living beings from smallest to highest are considered equal and with same concern as one's own self then none of these will be harmed, inflicted any injury and pain. Human beings will not encroach and exploit anyone beyond its capacity. There will not be destruction of any one. All will interact for mutual benefit. There will not be any

degradation and pollution of any sort. This single doctrine of equality unique in Jainism, with its ramifications, if imbibed and practiced can alone ensure healthy and peaceful environment.

**Belief of Nonviolence-** Nonviolence (Ahimsa) means that no harm should be done; no injury should be inflicted on any part or whole body of any life form. None should at all be killed, mutilated or destroyed. There should not be exploitation, overburdening of any. There should also be not any encroachment on rights, privileges, habitat, and territory of one another. Nonviolence is not only non-killing but also not causing any suffering and not creating any problem, difficulty and inconvenience for any one. While killing is extreme form of violence and is being committed on slightest pretexts, other common forms of violence are generally ignored and not even considered violence. Even evil thoughts in mind for others are violence. Hurting others by harsh words is also violence. The most common form of violence being ignored is over burdening the helpers, dependents, animals and natural resources and not giving them their food, clothing, shelter and compensation due to them. Like human beings and animals, natural resources earth (soil, minerals), water, air, energy and plants, individually and collectively as respective eco-systems, are also living beings and have carrying capacities, resilience and rejuvenation time-cycles. Even in human beings and animals capacities differ in weaker and stronger. A strong person can lift more weight than weaker. Some can tolerate more stress than others. Everyone have maximum and optimum tolerance limits continue unchecked. The same is true for natural resources. This can be illustrated by an example of forest eco-system. As trees grow in volume, the entire forest grows. In scientific forest management annual growth rate of a particular forest block is calculated. This is its capacity. If wood and other products from forest are extracted within this capacity, then no harm will be done to the forest and it will continue to grow and meet the requirements of human beings in sustained manner forever. Likewise other natural resources also have their carrying capacities, water bodies rivers, lakes etc. can tolerate specific amount of pollution and in fact some pollution is necessary as many aquatic living forms called detrites need detritus (waste) for their survival. There are indices B.O.D. (Biological Oxygen Demand) C.O.D. (Chemical Oxygen Demand), presence of aquatic flora and fauna for capacities of various aquatic eco-systems. Same is true for air systems also. In atmosphere there is optimum proportion of various gases Oxygen (O<sub>2</sub>), Carbon-di-oxide (CO<sub>2</sub>), nitrogen and others. There is continuous pollution, recycling and maintenance of the proportion. Carbon-di- oxide is emitted by humans, animals and other life-forms, more by human in their activities by burning fossil fuels for cooking, transport and industries. Carbon-di-oxide is continuously utilized by plants in photo-synthesis for synthesizing various products edible fruits, seeds, fibres, chemicals, medicines etc. If this loss of CO<sub>2</sub> is not compensated by humans and animals than proportion of O<sub>2</sub> will increase which will be harmful and lack of availability of CO<sub>2</sub> will impede synthesis of useful products by plants. However if CO<sub>2</sub> is released in quantities more than the capacity of plants then there will be harmful consequences of green house effect, climate change etc. rocks, minerals and soils also have their capacities and rejuvenation time cycles, of course on a longer scale. Earlier agriculture fields were being left fallow for a year, subsequently for one crop season. Now crops are being grown continuously on the same area up to three crops a year. This gradually reduces the natural productivity of soils.

The Jain belief of Non-violence addresses all aspects of protection, preservation and sustainability of environment by ensuring that no harm is done to any constituent of nature, big or small. The entire web of nature is so intricately and interdependently interwoven that no single individual groups or species can survive alone. Mankind with all its brain power, ingenuity and technology depends inevitably on natural resources which must be preserved for its own survival. No harm should be done to any. The concept of least harm is ambiguous because the definition of least will be different for different people in different situations. Jainism prescribes non- violence in all its ramifications, transgressions, permutations and combinations, answering all queries, doubts, problems in various situations authenticating its practical feasibility. Non-violence is must for one and all.

**Belief of Truth-** Truth is generally understood in a very restricted sense of not indulging in falsehood or not speaking a lie. But truth has much wider meaning. It is commitment for right and rational stand against all that is wrong, violent and superstitions. Truth is an important concomitant for nonviolence. Speaking harsh words is also violence. It is a stark truth that the environment, both physical and social, is getting degraded increasingly because of the anthropocentric approach, exploding population and spiraling consumerism of human beings. Mankind is still nurturing false notions of inexhaustibility of natural resources in spite of conclusive scientific proof to the contrary. Mankind must realize this truth and eliminate the causes for looming distress by following the doctrine of truth. Falsehood and false notions, which include distrust, deceit, superiority and inferiority complexes, are main causes of social unrest, rift, conflicts and wars. Truthful path can redress and redeem deteriorating physical and social environments.

View of truth does not permit defaming, ridiculing, speaking false ambiguous words against principles (Scriptures), advising mutilation of animals, exploitation of any life-form (including natural resources), wrong trading, theft and speaking such words which are unpalatable, causing sorrow, pain, anger, rift and conflicts. There are very elaborate instructions and guidelines in Jain scriptures to facilitate the observance of the vow of truth and guard going astray. One should have humility while telling the truth. Truth is manifold and can not be expressed in totality. Different thinkers have different interpretations and may be right in their own way. While telling truth views of others should also be respected. This principle of Syadvad (Anekant) is unique in Jainism and plays an important role in avoiding rifts between different persons, groups, societies, communities and religions.

Words that cause violence of any sort should not be uttered. The belief of Truth is important in order to strengthen the view of non-violence which is vital for social as well as natural harmony. Truth is courage for upholding what is right and rational. One should understand the truth of manifesting phenomena from time to time. Mankind as of now is face to face with grim and deteriorating natural environment and its dire impact on social harmony threatening the very survival of not only human beings but also all life-forms. This is stark truth, must be understood as such and appropriate truthful remedial measures should be taken by one and all. The Doctrine of Truth needs to be understood and followed in its wider perspective.

**Belief of Non stealing-** "One who takes anything of anyone without consent is thief." The belief of Non-Stealing forbids theft or stealing. Stealing is exploitation or usurping by force or unfair means other's things, habitats and possessions. This is also violence. The vow of non-stealing also reinforces the vow of non-violence. Non-stealing should not be limited between human beings only. It does apply in respect of other living beings also. One should not take, snatch or usurp possessions and conveniences of any other life forms. Natural resources soil, water, air, plants are also living beings and their exploitation beyond their carrying capacities is therefore also stealing. These natural resources also give out their products willingly. The tree drops fruits of its own for human beings and other animals. All relationships in nature are symbiotic i.e. for mutual benefit. Humans and animals by eating fruits get nutrition and simultaneously help the trees by dispersing the seeds far and wide. Several useful minerals are obtained from volcanoes. Air circulations and water circulations are natural and help all life forms. Soils of their own produce numerous plants and their products to meet all necessities of living beings including humans. Plants give away their various products leaves, flowers, fruits, bark, gums, resins, shellac, medicines and others voluntarily for use of humans and others. Plants also die natural death after completing their life-span and then their dead wood can be used for house building and other purposes. The Kalpavriksha (Forest) based life-style during happiest (Sukhma- Sukhma) era is an excellent example.

Non-stealing implies taking from natural resources also only that is provided by them naturally. Jainism ordains no harm to any. The intensity of good and bad attitudes denoted by special term 'Leshya' has been explained very comprehensively by example of taking fruits of trees. These attitudes or modes are equated with

colours white (shukla), crimson (padma), yellow (peet), light grey (Kapot), blue (Neel), Black (Krishna). The person who picks up naturally dropped fruits has best unblemished attitude like pure white colour (Shukla Leshya). Other who plucks only ripe fruits from branches is slightly tarnished and possess like lightly coloured crimson attitude (Padma Leshya). The third cuts away small branches to have all its fruits ripe and unripe and he is on lower scale of attitude than second and is compared with yellow coloured attitudes (Peet Leshya). Fourth person cuts bigger branch and is still lower with attitude like light grey colour (Kapot Leshya). Fifth person cuts biggest main branch is very bad with dark blue coloured attitude (Neel Leshya). Sixth person cuts away the whole tree and takes fruits only in limited quantity but deprives others totally presently and in future by destroying the very source of fruits. He is worst and is compared with dark attitude (Krishna Leshya).

One should neither steal nor ask non-encourage others to steal and should also not acquiesce stealing. To purchase stolen things, to violate laws such as tax evasion, to adulterate cheaper things in costlier for more profit, to weigh more and less while purchasing and selling are also acts of stealing and one should not do those. Weighing while purchasing and selling should be correct implies equitability in give and take from natural resources also. As in case of taking fruits from trees and simultaneously helping trees in dispersal of their seeds is an equitable mode of give and take. This sums up that we should compensate nature to the extent we take from it e.g. planting trees, keeping water sources and air clean and free from pollution. This belief of Non-stealing is therefore important for environmental health.

**Belief of non consumerism-** Aparigraha the important Jain doctrine and one of the five main mandatory vows ordained both for laity and ascetics, implies non-acquisition, non-possession and non-consumerism to promote social harmony and also to stop unbridled exploitation of natural resources. Enlightened Jain Arhats and Acharyas have, for ages, been advising restraint on consumerism and have prescribed vows to limit wants to minimum. With increasing industrialization and mad race for economic development, consumerism is rising because the very definition and index of development is higher and higher per capita consumption level. Any increase in consumption puts more and more pressure on natural resources, which are being exploited beyond their carrying capacities, damaging, degrading and even completely exhausting many of the shrinking resources. Presently consumerism is the most damaging cause of environmental degradation. Jain thinkers have examined in depth the root causes of consumerism. It is human weakness of indulgence in sensual pleasures of five sense of touch, taste, smell, sight and hearing and the insatiable desire and passion to acquire the means more and more that triggers consumerism and its twin concomitants acquisition and possession. The desires and the greed are deep pits of unfathomable depth and can never be filled. This irrational infatuation for desires and greed is termed "Murchha" which is like the state of intoxication in which one loses sense of judgment.

Jain thinkers practice that One should eat less, drink less and speak less i.e. Should be frugal. Land, houses, silver, gold, jewels, currency notes, domestic animals, food grains, clothing, servants, utensils, vehicles etc. are objects of senses and attachment and should be limited to minimum. Acquisition and hoarding in greed for higher profits and loading more than capacity of vehicles is also violation of the vow of non-consumerism. In order to reduce consumerism practices of limiting the use of various objects for short or long periods are prescribed to gradually bring it to minimum by practice. Consumerism has been described as cause of suffering in this world and also afterwards. People are advised to reduce even meals and use of water.

One who is contented within minimum limited needs and their acquisition and does not desire more also does not commit several types of violence inherent in acquisition and consumption. Non-consumerism is thus an effective measure to strengthen and facilitate the observance of vow of non-violence also. Such sagacity of Jain thinkers, visualizing dangers and need for minimising consumerism since the time when its effects were not even manifest, is creditable. In view of the level of consumerism rising rapidly and its disastrous effects looming large what is required is not only minimizing the needs and use of resources but to limit them within carrying capacities

of nature, collectively by all people. In the present context minimum is vague because it may be different for different people in different situations. The pressure on natural resources needs to be reduced to the level of their capacities. It requires collective effort by entire human society, irrespective of caste and creed.

Jain belief of non-consumerism is so meticulously and judiciously designed that it will eliminate inequalities and sufferings of entire human population. Simultaneously pressure on nature can be brought down to the level of its capacity. It will eliminate shortage of food, water etc., stop further degradation of environment and then reduce it. There will not be famines, floods, wars and conflicts. There will be peace and harmony in society, in entire biosphere and whole nature.

**Belief of Celibacy** - Since population increase is also one of the major causes for environmental degradation, Jainism has emphasized its control by one's own will voluntarily without coercion or force. The carrying capacities of natural resources and their rejuvenation capacities are limited. Therefore consuming population must be checked and kept within these limits. Every additional mouth will need more food, water and other things like clothing, shelter, transport etc. requiring additional exploitation of limited natural resources, putting more and more extra burden and thus causing their deterioration. This will also add to pollution levels of environment. It is argued that with one mouth there are two additional hands to work and therefore population explosion will not create any problem. But the fact is that the two hands will also work only on and produce from the shrinking natural resources. Even the production of a needle will require iron, water and energy. Celibacy is therefore one of the five mandatory views in Jainism. It prohibits unrestricted licentious sex.

The five indulgences stimulate sex and are prohibited. First is listening titillating sex stories, second is seeing bewitching, enticing, inviting sex postures and bodies of men and women, third is the sumptuous meals, fourth is recollecting past sexual pleasures and fifth is the sex stimulating traditions and practices. The present generation is being bombarded by all these through cinema, radio, TV, news, advertisements, pornographic literature and promiscuity seen in clubs, hostels, work places etc. Jain thinkers visualized all this long back and advised all necessary precautions.

To be involved in arranging marriages, going to prostitutes, divorced lonely married bad character women and unnatural sex with other organs are transgression of the vow of celibacy and are prohibited. This belief of celibacy is instrumental in population control and consequent increase in consumerism and thus reducing pressure on natural resources and eventually checking further degradation and pollution of environment. It is also a recorded fact that sex is cause of many crimes of murder, loot, harassment, suicides. The vow of celibacy is important for social harmony also.

**Belief of Abstinence**- This is a supplementary and auxiliary doctrine to support and strengthen the observance of five mandatory vows of non-violence, truth, non-stealing, non-consumerism and celibacy. Jain thinkers prescribed rules and sub-rules so that there is no loophole for transgressions and laxity. Jains believe that one should not take wine and any other intoxicating substance". The harmful effects of growing use of intoxicating substances are well known. They destroy the person, his family and peace in society. Many crimes of violence, theft etc. are committed by addicts and persons under intoxication they feel that The best ideal religion is ten fold i.e. first pardon or forgiving and abstaining from anger, second to abandon all types vanity of knowledge, wealth, strength etc., third to be straight forward without hypocrisy; fourth to be truthful, fifth to abandon greed; sixth to be disciplined; seventh controlling five senses and mind; eighth to practice austerity, ninth to be liberal in charity and tenth is celibacy.

One should not take impure adulterated food, should be pure vegetarian Vegetarianism is highly beneficial for environment protection as non-vegetarian takes almost ten times more than a vegetarian and puts much more pressure on environment. Animals eat vegetation and utilize 90% of the calorie intake for their metabolism and store only 10% as meat and thus a non-vegetarian gets indirectly only 10% of vegetation consumed by animals or birds whose meat he consumes and thus requires ten times more vegetation, land, water, manure than directly consuming vegetation. Abstaining from wine, meat, honey and observance of five vows are eight essential attributes of a Jain. Prohibition of use of honey is unique in Jainism. Apart from "Some house holders are better than many monks in observing vows and abstinences. In Sthananga Sutra house holders are regarded as bearer of entire onerous responsibility of maintenance of monks. Monks solely depend on house holders for meals, clothing, utensils, traveling and staying arrangements. Hence conduct of both monks and house holders is important for social harmony. According to Mahaprajna, an eminent, enlightened head monk of Terapanth Shwetambar Jain sect, there

was not much distinction between monks and householders in Parshvanath tradition. Both wore almost same set of clothes. There was no difference in set of vows as Anuvrata (milder form of vows) and Mahavrata (Strict form of vows) separately for house holders and monks. This puts a question mark on the very institution of monk-hood which is escapism from the challenges, hardships and responsibilities of household, social and national duties. Monks, who do not have any experience of householders' problems, cannot be competent to preach and advise householders. Ideally they should set an example as a good house holder. Example is better than precept. Salvation is attained neither by becoming Digambar (naked), nor by wearing white clothes, nor by logical arguments, nor by brooding over description of 'tatvas' (elements, things, phenomena) in scriptures. Salvation is freedom from psychic motions of anger, vanity, hypocrisy and greed. Various abstinences ordained in Jainism if followed will free the person from all sorrows and pains. These are sure panacea for all ills in society. As no harm will be done to any constituent of environment such a life-style of abstinence will go a long way in protecting and preserving the natural environment.

**Belief of Awareness-** Awareness or mindfulness is pre-requisite for following any doctrines and observing any vow and abstinence and even any act in life. Synchronization of mind and body is essential while undertaking any activity. No doctrine can be followed, no vow can be observed, no abstinence can be practiced properly and no work can be done rightly if mind is wavering some where away from the body activity in hand. This is important not only in religious pursuits but also in all activities. If while driving mind is not concentrated on it, then there will be accidents, while cooking one may burn food and oneself, while walking one may slip and fracture some organ if not careful to observe and avoid slippery substance oily or watery. This is true in case of every activity for performing any act properly one should first learn its skills and then concentrate on it while executing. Both learning proper skills and then doing with concentration is awareness. Acharya Mahaprajna has even quantified efficiency as less than 25% if not done with awareness. Jain consider If one is walking carelessly without awareness and whether any creature is hurt and killed or not he is guilty of committing violence. Contrary to this if one walks carefully and with caution and if any creature is hurt or killed, he is not guilty. One should walk carefully, cautiously with awareness (concentration) so that no life-forms moving, shrinking, spreading, staying, hidden in soil are hurt and killed. They feel that One should not take fruits containing large number seeds, fruits with thorns and such things in which major portion is thrown away as waste and very little is edible such as sugarcane etc." Wild animals, birds, insects require these and can digest their major portion than humans.

Such methodical, meticulous and comprehensive instructions about awareness (mindfulness) are necessary for welfare of an individual, family society and natural physical environment also. Awareness is necessary for individuals, families, groups, societies and nations for all sort of problems, apprehensions, diseases, calamities - natural and man made, wars conflicts, environmental degradation, so that proper timely remedial measures can be taken.

**Belief of Karma-** in Jainism the principle of karma or karmic theory is very important. It is very elaborate and comprehensively explains all events and phenomena on the basis of karma i.e. actions and interactions. There is great emphasis on the principle of cause and effect that good actions bring good results or rewards and bad actions give bad results and even sorrows and sufferings as punishment. This is in nutshell the doctrine of karma. Jainism is quite explicit in cautioning that each person is responsible for his own deeds and enjoys or suffers according to nature and quality of his own acts good or bad. No one else can do anything. Past deeds create present and present deeds future destinies. But the intensity of fruition of past deeds can be reduced or enhanced proportionate to quality of good and bad deeds in present. Only the person himself can do it and none else. Tirthankar, arhat, acharya, any deity, gods and goddesses, rituals, havans, mantra and tantra are incompetent and incapable of providing any relief. Mahavir said that he can not ameliorate any body's fate or destiny as a result of the person's past deeds but the person himself can do by following the path advised by Tirthankars that is "Karma is activity by soul (living beings) Any act, deed done by any living being under the influence of psychic emotions of anger, vanity, hypocrisy, greed and also irrationality (Mithyatva), non-awareness (Pramad) and by any of the three modes of mind, speech and body is called 'KARMA'.

The karma or deeds did previously influence subsequent deeds. Thus the previous deeds are cause of present deeds which are effects. The present deeds are cause of future deeds which are effects. This cycle of cause and effect continues". One should therefore abstain from misdeeds and do only good deeds. It is bad deeds that

create problems and sufferings for individuals, groups and societies. Only good deeds can neutralize the bad effects of bad deeds. The natural physical environment is also degraded and polluted by bad deeds, the anthropocentric attitude and over exploitation of natural resources to cater the growing consumerism and numbers. This can only be resurrected by stopping these bad deeds, optimizing numbers and consumption within the carrying capacity of nature.

**Belief of Rationality-** Samyaktva i.e. Rationality in belief, thought and action is key word in Jainism. It implies most appropriate, reasonable attitude and behaviour in a given situation in space-time-matrix (Dravya, Kshetra, Kaal, Bhaava) conforming to basic tenets. Samyaktva and superstition are diagonally opposite. There is no place for superstitious rituals, miracles, mantras etc. because the principle of Karma, intrinsic in Jainism clearly lays down that one reaps the fruits of one's own actions (Karma), good or bad. The bad karma and its bad results in suffering can be mitigated only or even neutralized by one's own efforts i.e. one's own good deeds and none else, any deity, gods or goddesses, mantra-tantra by others can help. The liberated souls 'Arhats', the idols of which we worship, do not do anything. The only objective of their worship is to recollect their teachings and follow them. Arhats preached the good path they themselves tread. Begging worldly benefits from idols of Jain Tirthankaras is 'Mithyatva' i.e. wrong and is sin. Rational belief (attitude), knowledge and conduct all three combined and simultaneous only is path to salvation i.e. freedom from all sufferings". It is important to note that in the above Sanskrit stanza there is deliberate grammatical mistake of using correct path to emphasise rationality in all the three combined and simultaneously.

Samyaktva (Rationality) is prerequisite in observing any of vows and abstinences. A rational person will always be reasonable and will not do wrong lest harm to anyone. Rationality is the key to social harmony and also for health of physical natural environment.

**Belief of Symbiosis-** Symbiosis or mutualism means such actions and interactions of individuals or groups that are mutually beneficial and do not cause any harm to anyone. If individuals or groups of any form of living beings live helping and co-operating each other, then their life will certainly be happy and peaceful. In contrast if they live exploiting each other, then they will be unhappy and miserable. Nature is inherently symbiotic and its multitudinous constituents both animate and inanimate are intricately interwoven and they interact with delicately balanced precise and intrinsic interdependence. The very basis of evolution of life is symbiotic and congenial environment. Scientists are unanimous about it that even unicellular spark of life could not have taken place under slightest unfavorable physical or chemical interaction between any of the constituents in ambient environment, e.g. the temperature even a fraction of degree less or more than the optimum. The unicellular fetus develops into multi-cellular complex body only because there is congenial environment in the womb.

Many animals and birds, hyena, jackals, vultures etc. are scavengers and eat the leftovers of others and also dead bodies and help in environmental sanitation. Deep sea creatures, many fishes etc. are detritus and live on detritus (waste) in water bodies and maintain cleanliness. There are several agents in nature to maintain sanitation, Scientists are studying and utilizing these to clean water-bodies etc. from toxins of various types more efficiently and economically than artificial mechanical or chemical methods. For cleaning the polluted Susan lagoon, microphytes, macrophytes, algae, fungi, crabs, larva, planktons were brought from natural water source to clean it by their interacting food chain. Some plants, halophytes, *Haloxylan recurvum* (Lana), *Sasoda harrorosona* (Sajji), *Suada mudifora* (lunia) accumulate salts from saline water up to 40% to 50% and these plants yield 20- 30% oil, 10-20% proteins, are good fodder and poultry feed. Phytoremediation of fluoride contaminated ground water can effectively be done by aquatic plant *Hydrilla verticillata* and the plant does not show any toxicity symptoms; it grows and multiplies in presence of fluoride. The symbiotic association of bacteria and micorrhiza in root zone of plants is an effective rhizosphere bioremediation of soils contaminated with xenobiotics being released by various industries. Thus there are numerous examples of mutualism in nature. There is symbiosis (mutualism) not only at the level of eco-systems and sub-systems of various types and sizes but also at universal level between different planets and galaxies orbiting in their respective orbits in perfect harmony. Earth's moon can be cited as an example. It exerts considerable influence on climate of the earth and its inhabitants. Its tidal influence is well known. It is because of moon that inclination of earth with its orbital plane around sun is at 23°27' keeping the variation within 1°3' which maintains regular seasons and climate congenial for its inhabitants. The variation in case of mercury is 90° and that of Mars is 60°, resulting in extremes of harsh climate there. There is perfect cosmic symbiosis also in

space-time and matter. According to Einstein, gravity is consequence of the fact that space-time is not flat but curved and warped by distribution of matter and energy in bodies like earth. The mass of sun curves space-time in such a way that although earth follows a straight path in four dimensional space-time, it appears to move along a circular orbit. The matter and energy effect space-time and vice-versa.

In human society also mutually beneficial, complementary relationships between individuals, groups and nations are necessary for peace and happiness. Symbiotic relationship implies obligation and duty to help weak, disabled, poor, sick and old. Such conditions are generally inevitable and everyone is prone to these. It is not out of compassion or charity but as a duty that society should take care of such people because any one, any time may get afflicted by any disability needing care and help. Old people have given a lot to society and their experience can be gainfully utilized and therefore they should be cared not out of pity but as duty.

It is human beings who are the main cause of disharmony. If mankind understand, imbibe and follow the natural law of symbiosis (mutualism) not only for human beings but all life-forms and even larger natural systems, the entire environment will be healthy, peaceful and harmonious.

**Belief of Kalpavriksh-** in Jain chronology Kalpavrikshas (benevolent trees) or forest based life-style has been described as best, ideal, most peaceful, harmonious and happiest. In Happiest (Sukhma-Sukhma) era the first in sequence in cyclic change during Avasarpini phase and last in Utsarpini phase the life-style was forest based. People fulfilled all their needs from various products of several types of trees. Because of such a benevolence of trees they were adored as Kalpavriksha i.e. Miraculous providing instantly whatever was required. There is nothing miraculous in instant availability of products of trees to fulfill needs because several types of trees provided edible flowers, fruits, seeds, fibres for clothing, wood for shelter, chemicals, medicines etc. all the year round as different trees flower, bear fruits and give various products in different seasons. So every thing was instantly available all the time. Kalpavrikshas were just the same trees we find these days also in forests and gardens. They were vegetation type (Vanaspati kaya). In scriptures Kalpavrikshas have been put under earth form (Prithvi Kaya) which appears to be an aberration, may be because of metaphorical exaggeration to justify benevolence as miracle or in metonymical style so typical of literature of that time or assuming it as continuation of Stone Age. In the same scriptures there is mention that these Kalpavrikshas were bearing new leaves by sprouting, flowers and fruits as trees we see now and even of names Chamba, Ashoka etc. Obviously they were not earth form (Prithvi) but plant-form (Vanaspati kaya) as is evident from.

The happiness, peace and harmony have been directly proportional to extent of forest area and number of trees. As these areas declined because of anthropocentric attitude and greed of mankind happiness was reduced and conditions changed from good to bad to worst. When earth's surface was covered by dense forests the problems of soil erosion, water shortage, storms, famines etc. were non-existent. In dense forest areas more than 90% of rainfall goes as infiltration to build up sub soil resources to feed rivers, lakes, wells, tanks all the year round. As less than 10% goes as run off there are no devastating floods. Trees also considerably reduce the velocity of wind and thus minimize the damage from storms, cyclones etc. Trees provide variety of edible seeds, fruits, flowers etc. all the year round about 2.00 tonnes hectare per year more than the world average of 1.25 tonne per hectare per year from high tech agriculture. Forests once established continue to regenerate and grow naturally forever if managed scientifically and within their carrying capacity. Forests do not require recurring expenditure on tilling, sowing, seeds, fertilizers, irrigation etc. In forests tilling is done by numerous rodents, earthworms etc. Forests conserve enough moisture and do not need irrigation. Enough manure is added through leaf fall and natural recycling and no additional manuring is required. In high-tech agriculture the input recurring costs are spiraling and nowhere in world it is economically viable and is sustained only by huge subsidies, in spite of which many farmers commit suicides.

Forest crops are also immune from damage by vagaries of nature such as excess or deficit rainfall. Forests provide all that humans need free of cost. Forest can be raised on all types of land almost on 90% of land surface because there are trees suitable for all sorts of edapho- climatic conditions on plains, hill slopes, sandy deserts, marshes, water logged areas etc. Agriculture can only be done on hardly 10% total land surface.

Another important aspect of forest based life style is that runaway populations are kept optimum according to natural availability of food as proved by recent experiment on wolves in Germany. With advent of agriculture populations started increasing disproportionate to carrying capacities of natural resources soil, water etc. This created vicious circle as for more population and more land needed and so on. In high tech agriculture being adopted more and more everywhere the indiscriminate use of chemical fertilizers and poisonous pesticides is

increasing and is dangerously polluting soil, water and air and the pesticides are entering human bodies with biological magnification causing fatal diseases even cancer.

In forest based system all constituents of nature interact symbiotically i.e. for mutual benefit. There is no violence of any sort. Forest based life style is therefore most congenial for all living beings and does not cause any harm to the natural physical environment. It is in forest based system only that all the doctrines of Jainism can be followed and observed in true sense in letter and spirit.

**Belief of sustainability** - There is unanimity that sustainability should be the primary consideration in every programme big or small and more so in case of any developmental activity. Even modern economists though advocate consumerism yet swear by sustainability. Indiscriminate consumerism and sustainability are not compatible with each other. In the modern planning on the one hand there is emphasis on sustainability and on the other hand unbridled consumerism is encouraged for rapid growth. The very index of development in modern economic growth is 'higher and higher consumption'.

Any growth or development can only be sustained by conservation and judicious use of natural resources on which it inevitably depends. For sustainability it is necessary that natural resources should be used sustainably; and that is only possible if utilization of natural resources is within their respective carrying capacities. Natural resource and it is being consumed many times more than its replenishment and renewable. There are clear warnings that at the present rate of consumption most of the natural resources will not last long and will be completely exhausted within next 100-200 years. If the crude oil, iron, coal and other minerals on which the entire edifice of modern civilization and development is built are exhausted, the result will be that the whole edifice will crumble down. Water is the most important capacity. There is already recurring and even perpetual water famine in several areas. Water pollution is increasing dangerously and there is acute scarcity of even safe drinking water. Water born diseases and casualties are increasing. Same is the case with soil which is another important resource. Air, so vital for survival, is also getting polluted more and more. Green house effect and climate change are also the results of rising consumption levels. To avoid eventual catastrophe it is necessary to reduce consumption level within the carrying capacity of natural resources. This alone will ensure sustainability which will otherwise remain a mere slogan and not a real commitment.

The description of cyclic changes, various succession or retrogression stages and best happiest stage and also of sustainability of a particular desired stage in Jain Scriptures is not a mere conjecture but a scientifically researched, established and documented phenomenon operating in numerous eco-systems in nature. Mankind on planet earth at present is in fifth unhappy (Dukhma) stage and if it does not take appropriate steps will plunge in further sad most unhappy stage. Conversely it can also stop further degradation and reverse the process of retrogression to progressive to any good, better and even best stage. It is in our hands and we can certainly do it. Rays of hope have already started emanating and may intensify and reduce the damage and degradation inflicted by mankind itself. Mankind alone can cure it, improve it, and redeem it.

**Conclusion-** Jainism in the end tends towards Deep Ecology. There is need of environmental ethics. Nature is intrinsically valuable. It is abundantly clear from the above discussion that nature is treated reverentially in Jain tradition. Jainism deals with permanent values of life which are of enduring benefit to mankind. Ecological sensitivity of Jain seer is reflected in the concept of non-violence as the supreme religion. It is more than a moral precept. It is equated with deity and is described as protector of the whole universe. Practically it is the observance of mindfulness and self control in our behavior to others. Jainism in the end tends towards Deep Ecology. There is need of environmental ethics. Nature is intrinsically valuable. It is abundantly clear from the above discussion that nature is treated reverentially in Jain tradition. Jainism deals with permanent values of life which are of enduring benefit to mankind. Ecological sensitivity of Jain seer is reflected in the concept of non-violence as the supreme religion. It is more than a moral precept. It is equated with deity and is described as protector of the whole universe. Practically it is the observance of mindfulness and self control in our behavior to others.

The first step should be to change the attitude from anthropocentric and selfish to compassionate and universal for all the constituents of environment both animate and inanimate. The attitudinal change then should be translated into practice and deeds. The fourteen aforesaid environmental doctrines of Jainism based on most judicious logical and scientific basis if understood, imbibed and followed will address all issues and problems concerning environment and ensure its preservation and redemption.