

Ethno-ecological Introspection into *Bhagawatgeeta*: 3. Conservation and Ramification of Biodiversity

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ABSTRACT According to the *Geeta*: perception and realization of one imperishable divine existence as undivided and equally present in all individual beings is the only means for the conservation of the biodiversity. The description of the Divine personality as: “He has endowed with numerous arms, hands, thighs and feet on all sides; many bellies and heads in all directions with innumerable mouths, teeth, eyes and ears all round, extended in countless forms pervading everywhere” stands as the most appropriate representation of the global biosphere as a single unit as per the modern ecological science.

INTRODUCTION

The existence of earth as a being as ascertained by tracer techniques is 4500 million years. Life originated on this planet some 3500 million years ago. This time period if compressed into a time scale of 24 hours, then the ancestors of the modern man being arrived only two seconds before midnight. *Homo sapiens* came only one second before midnight; agriculture came about 0.25 seconds, and industrial revolution started only about 0.0001429 seconds before midnight. But during this short time-span of the human existence on earth, there has been a considerable damage to the earth system and its atmosphere. Far-reaching changes have taken place through out the globe, and landscapes have been changed beyond recognition. These changes began in the middle of the eighteenth century with the invention of steam engine and use of coal as the source of energy. Environmental degradation has been associated with most of the human endeavours leading to changes in the chemistry of the air (green house effect), Ozone depletion, deforestation, loss of soil, desertification, water scarcity and pollution, urban sprawls, toxic wastes, unsustainable use of energy, species loss, ecological distort, etc. All these negative ecological activity can be traced to the unsustainable human development. It is rightly remarked by John McHall that “The human being has thus become the most dangerous organism that the planet has ever hosted”.

Humankind- The *Homo sapiens* represent as only one species out of more than 1.7 million living beings reported so far. Man himself has

defined the environment as the sum total of all conditions and influences that effect the development and life of organisms. In such a situation, man has to live in harmony with nature and avoid any sort of conflict with nature. It is a fact that, the planet Earth with all its life forms can exist without human beings, but human beings can not exist without the other biota. Man as thinking species should take the responsibility of being the guardian of other species. The present communication is an attempt to explore the concepts of *Geeta* for conservation of biodiversity, in continuation to earlier works (Padhy 2013a,b).

ETHICS FOR CONSERVATION OF BIODIVERSITY IN *SSRUTI* AND *SMRUTI*

Sruti is the other name of Veda. A famous version of *Yajurveda* (40.1) says: “The whole universe with its creatures belong to the Lord (Nature). No creature is superior to any other, and the human beings should not have absolute power over the nature. Let no species encroach upon the rights and privileges of other species. However, one can enjoy the bounties of nature by giving up greed”.

Modern Environmentalists consider that, this advise oriented vedic concept is the most ancient idea of mankind for conservation of the biodiversity (Khoshoo 1995). All the plants, animals and micro-organisms of the nature work with a sacrifice (*Yajnya*) motive and interact with each other from work culture point of view (Padhy 2009). Veda has many such *sslokas* which are thought provoking from ecological point of view. Another such example (*Yajurveda*: 40.6) says:

“Look upon all the animate beings as your bosom friends, for in all of them there resides one soul. Behave with others as you would with yourself. All are but a part of that universal soul. A person who believes that all are his soul-mates and loves them all alike, never feels lonely. He experiences the intense joy throughout his life.”

Smruti refers to *Dharma Ssastra* (ethical law books) which include social laws, usages, customs, manners and moral codes. They are post vedic, with applied sociological value. There are twenty major *smruties* and fifty minor. *Manusmruti* the first ethical law book of the world has encouraged non-violence to sub-human beings and vegetation from ethical, social, symmetrical, administrative, dietic and religious point of view, which has reflected on the conservation of biodiversity from ecological stand point (Padhy 2000). The conservation laws of Manu originate in three forms (1) ethical dictum-in the form of advise (2) offensive dictum-declared as punishable, and (3) self restriction dictum-a committer of environmental sin is asked to undergo penance; a prevention to commit the mistake again (Padhy et al. 2006).

In this context, it is necessary to put forth two distinct ideas on non-violence, as:

1. The vedic concept;
2. The Ascetic concept.

The vedic concept of *Ahimsaa* (non-violence) states that only that type of injury is *Himsaa* (violence) proper, which is against the vedic injunction. It is a big question whether *veda* ever sanctioned *Himsaa*? Various interpretations in this regard are in support (MacDonell and Keith 1912) or against the vedic concept of *Himsaa* (Das 1960).

The ascetic view of *Ahimsaa* means not to cause suffering to any living being at any time either by mental, vocal or bodily activities (Tahtinen 1976). In this context the Gandhian view of non-violence, derived from the ascetic sources says that non-violence is not essentially regarded for all biological life, it is rather the non-exploitation of sentient creatures. Gandhi understood that non-violence is a mental behaviour. It means the absence of ill will (Gandhi 1950). The themes of non-violence and humanity (*Maanavikataa*) can act as neutralizing factors against the brutal activity of mankind and save the world from destruction of biota (Gandhi 1948-1949).

Few exemplary revealings on non-violence from *Manusmruti* towards conservation of biota with an ecological perception are presented below (Buhler 1886).

Ethical Sense of Non-violence

- ♦ An elite person must seek a means of subsistence which either causes no or at least little pain to others and live by that except in time of distress (*Manusmruti*: IV/2).
- ♦ Whether he dwells in his own house, with a teacher or in the forest must never even at the time of distress, cause an injury to any creature (*Manusmruti*: V/43).
- ♦ He who does not seek to cause the sufferings of bonds and death to living creatures but desires the good of all beings, obtains endless bliss (*Manusmruti*: V/46).
- ♦ He who does not injure any creature attains without an effort what he fixes his mind on (*Manusmruti*: V/47).
- ♦ In order to preserve living creatures let him an ascetic always by day and night, even with pain to his body, walk carefully scanning the ground (*Manusmruti*: VI/68).

Non-violence from Social Point of View

Non-violence is focused as a social law, prime among the summary of verdicts such as:

- ♦ *Ahimsaa*, *Satya*, *Asteya*, *Ssoucha* and *Sanjam* (*Manusmruti*: X/63).
- ♦ Persons leading their livelihood at the cost of pain directly or indirectly to animals, were highly discouraged in the society through their non-entry into festive rituals like *Ss-raaddha* (*Manusmruti*: III/ 152, 162, 164, 166).
- ♦ A person, who owns the profession of selling flesh, was considered so degraded socially that none was expected receive gifts (*daana*) from him.

In order to make him conscious of the outcome of violence of this life, (which) lead to sufferings in the next life; it is told that:

- ♦ As many hairs as the slain beast has, so often he will suffer a violent death in future births, who killed it without a lawful reason (*Manusmruti*: V/38).
- ♦ He who injures innoxious beings from a wish to give himself pleasure never finds happiness, neither living nor dead (*Manusmruti*: V/45).

This is certainly a point of discouragement to cause violence, as the Hindu mythology believes in future rebirth.

Non-violence from Dietic Point of View

Manusmruti has classified the human beings into three categories; such as *Raakshaasa*, *Pissaacha* and *Manushya* on the basis of food habit, social and cultural activities (Das and Padhy 1997). Eating of flesh and consuming alcohol is attributed to the former two groups of lower status, while *Manushya* is considered to be vegetarian (Dash and Padhy 1998a) which is reflected in the following.

- ♦ He who does not eat meat like a *Pissaacha*, becomes dear to man and will not be tormented by diseases (*Manusmruti*: V/50).
- ♦ Meat can never be obtained without injury to living creatures (which is detrimental to the attainment of heavenly wish); let him therefore shun (the use of) meat (*Manusmruti*: V/48).
- ♦ Considering the origin of flesh and the cruelty of fettering and slaying corporeal beings, let him entirely abstain from eating flesh (*Manusmruti*: V/49).
- ♦ He who permits the slaughter of an animal, he who cuts it up, he who kills it, he who buys or sells meat, he who cooks it, he who serves it up and he who eats it, must all be considered as the slayers of animals (*Manusmruti*: V/51). The above involves a chain of events and persons to create the consciousness of non-killing an animal.
- ♦ The guilt of one who slays not as that of him who eats meat for no purpose (*Manusmruti*: V/34).
- ♦ There is no greater sinner than that man who seeks to increase the bulk of one's own flesh by the flesh of others (*Manusmruti*: V/52).
- ♦ Me the *Maam-sah* will devour in the next world, whose flesh I eat in this life; the wise man declare this to be the real meaning of the word flesh (*Maamsha*) (*Manusmruti*: V/55).
- ♦ Alongwith the above dicta a broad spectrum of ecological subgroups of animals, birds are specially mentioned which are not to be killed for eating purpose (see chapter-V of *Manusmruti*). This is an attempt to create eco-consciousness through an ethical sense.

Administrative Responsibility for the Protection of Biota

- ♦ The king being the administrative head, whose conduct is expected to reflect on the society is advised not to involve in hunting, a cruel play which involves unwanted death of innocent animals (*Manusmruti*: VII/47-50).
- ♦ The king was empowered to punish a careless driver of cart, who causes the death of any man or domesticated animal (*Manusmruti*: VIII/296-98).
- ♦ Even a blow struck against man or animals in order to (give them) pain, shall be inflicted with a fiscal punishment proportion to the amount of pain caused (*Manusmruti*: VIII/286).
- ♦ According to the usefulness of the several (kinds of) trees a fine must be inflicted for injuring them; that is the settled rule (*Manusmruti*: VIII/285).

It is worthy to mention here, that the death of a street dog or cat in road accident or spoilage of a plant for no purpose, is seldom bothered by any one in the present day society.

Animal Sympathy and Culture

Much emphasis has been laid on animal sympathy in Indian culture which is evident from our day to day life, rituals and festivals. Few examples from *Manusmruti* are as follows:

- ♦ Let him gently place some food on the ground for dogs, crows and insects (*Manusmruti*: III/92).
- ♦ Let him not travel with untrained beasts of burden, nor with (animals) that are tormented by hunger or disease, or whose horns, eyes and hoofs have been injured, or whose tail has been disfigured (*Manusmruti*: IV/67).
- ♦ Let him always travel with (beasts) without urging to goad them much (*Manusmruti*: IV/68).
- ♦ Let him not interrupt a cow who is suckling (*Manusmruti*: IV/59).
- ♦ A damage caused by a cow within ten days of her calving, should not be considered as a cattle mischief. Moreover it is advised that there should be sufficient reserved space as pasture land around a village or thrice of that around a town for grazing (*Manusmruti*: VIII/242).

Penance (*Praayasschitta*)

Manusmruti has devoted a full chapter (XI) to explain about penance for a sin performed intentionally or unintentionally.

Penance is often misinterpreted as an escape from sin, but truly it is a course of optional, gives a chance for realization to some one who has committed the sin. Penance should not be considered as a nullifying factor against any wrong action or to erase any sin. It rather puts a self restriction and prevents a person from committing any offence. This view of penance was tactfully presented in *Manusmruti* for the conservation of Biota by creating consciousness about non-killing of animals and plants from ecological point of view. A list of biota (mammals; birds; reptiles; amphibians; fishes; small animals-bone or boneless; insects; green trees for fire wood; fruit trees; shrubs; creepers; lianes; flowering plants; agricultural species for no good purpose and plants which spontaneously spring up in forest) can be traced in *Manusmruti*, either killing or destroying for which a penance is prescribed (Dash and Padhy 1998b).

GEETAA'S VIEW ON CONSERVATION OF BIODIVERSITY

In *Geetaa Srikrishna* has not discussed much about *Himsaa* and *Ahimsaa* in relation to conservation of biodiversity. His approach in altogether different than the other views, which can be summarized as follows:

The *Geetaa* says: perception and realization of one imperishable divine existence as undivided and equally present in all individual beings is the only means for the conservation of the biodiversity. The Divine personality as: "He has endowed with numerous arms, hands, thighs and feet on all sides; many bellies and heads in all directions with innumerable mouths, teeth, eyes and ears all round, extended in countless forms pervading every where" (*Geetaa*: 11/16, 23; 13/13) stands as the most appropriate representation of the global biosphere as a single unit as per the modern ecological science. This is the true essence of worship to the divinity. The various selected narrations of *Geetaa* with diversified approach in this regard are as follows:

- ♦ The soul dwelling in the bodies of all can never be slain (*Geetaa* 2/30).

- ♦ The wise look with the same eye on a *Braahmana* (a learned and cultured man), a cow, an elephant, dog and a Pariah too (5/18).
- ♦ Who is delighted in the welfare of all beings, attains the beatitude of *Brahman* (5/25).
- ♦ He (whose mind being harmonized in Yoga) sees himself in all beings and all beings in himself; he sees the same in all (6/29).
- ♦ He who sees Me (the universal self) present in all beings, and all beings existing within Me, never loses sight of Me, and I never lose sight of him (6/30).
- ♦ He who, established in oneness, worships Me abiding in all being; abides in Me, no matter what he does (6/31).
- ♦ He who looks on all as one, on the analogy of his own self, and looks upon the pleasure and pain of all with a similar eye-is regarded as supreme (6/32).
- ♦ The life element by which this universe is upheld- is my higher *prakriti* (nature) (7/5).
- ♦ All beings have evolved from the two fold *prakriti*: *Para* (life-principle) and *Apara* (material); I am the source of the entire creation (7/6).
- ♦ I am the life in all beings (7/9).
- ♦ Know Me as the eternal seed of all beings (7/10).
- ♦ I know all beings, past as well as present, may, even those that are yet to come; but none knows Me (7/26).
- ♦ All beings reside within the Supreme *purusha* and by whom all this is pervaded (8/22).
- ♦ My divine (power of) yoga is the sustainer and creator of the beings (9/5).
- ♦ Know that all beings abide in Me (9/6).
- ♦ All beings enter my *prakriti* (the prime cause) during the final dissolution and I generate them again at the beginning of next creation (9/7).
- ♦ Animating my *prakriti*, I send forth again and again all this multitude of beings helpless under the regime of *prakriti* (9/8).
- ♦ I am equally present in all beings; there is none hateful or dear to Me (9/29).
- ♦ I am the self seated in the hearts of all beings. I am the beginning, the middle and also the end of all beings (10/20).
- ♦ I am the consciousness (life-energy) in living beings (10/22).

- ♦ I am the seed of all life (Genetic principle-DNA). No creature, moving or inert, that can exist without Me (10/39).
- ♦ Those who are engaged in the welfare of all beings-varily they come unto Me (12/4).
- ♦ He who is free from malice towards all beings, friendly and compassionate to all-is dear to me (12/13).
- ♦ He who is not a source of annoyance to his fellow-creatures, and who in his turn does not feel vexed with his fellow-creatures-is dear to Me (12/15).
- ♦ Whatsoever being, animate or inanimate, know it as an emanated from the union of *kshetra* (matter) and *kshetrajna* (spirit) (13/26).
- ♦ He alone truly sees, who sees the supreme lord as imperishable and abiding equality in all perishable beings, both animate and inanimate (13/27).
- ♦ Whatever forms (species of various kinds) are produced, in any wombs whatsoever, the nature is the conceiving Mother, while I am the seed-giving Father (14/4).
- ♦ The eternal; *Jiivaatmaa* in the body of beings of the biodiversity (*Jiivaloka*) is a part of My own being (15/7).
- ♦ I support all creatures by My vital energy (15/13).
- ♦ I am seated in the hearts of all (15/15).
- ♦ The Yogi established in identity with *Brahma* in all beings attains supreme devotion (18/54).
- ♦ The Lord dwells in the hearts of all beings, causing them to revolve as though mounted on a machine (18/61).

All these above facts have been described by *Srikrishna* while narrating various topics. From environment science point of view the gist can be put forth as follows:

1. The physical body of every living organism is a combination of nature's abiotic factors and the life force (*Chetana Shakti*).
2. The *Chetana Shakti* can be called as *Aatmaa*, *Jiivaatmaa*, *Jivana*, *Para Prakriti Beeja*, *Kshetrajna*, etc. with various names. The life-force is pervaded within all living organisms in equal form. Scientifically it can be co-related with the cellular genetic system and metabolism. However, the *Chetana Shakti* is certainly above the metabolic network. Science can answer to

questions emerge out of 'How?'; but can not answer the phenomenon 'why?'.

3. The divine life-force and the biological world are intimately associated with each other.
4. The man who realizes the existence, evolution, holding power, fostering and pervading of the *Chetana Shakti* in every living being and who understands others joy and sorrow as his own, on the analogy of his own self, with a similar view, is worthy to be worshiper of the Almighty.
5. Perception of the divine existence in all the living forms is the true essence of worship (to divinity) and the only means for the conservation of the biodiversity.

GEETAA'S VIEW ON REMIFICATION OF BIODIVERSITY

In Indian subcontinent it is believed that a being undergoes spiritual evolution on its every rebirth. An *Aatmaa*, which is separated from the *Paramaatmaa*, and encased within a physical living body as a being, passes through eighty four lakhs of life forms with repeated birth and death to meet with the almighty in a spiritual evolution. Out of these eighty four lakhs, 80 lakhs of life passes as other sentient beings with automatic physical and psychological evolution to higher forms. Such life is known as *Tirjaka Yoni* (subhuman birth) or *Bhogo Sarira* (evolution with experience of life). The other four lakhs of life passes as human being where the evolution is a spiritual progress pertained to some one's *Karma* (duty). Human life is known as *Karma Yoni* where the work culture is the basis for his evolution in the spiritual pathway. The laws of *Karma* and its cause and effect are beyond the discussion of this article. This imagination of 80 lakhs of life forms in ancient Indian mythology is an apparent idea of the expansion of biodiversity. *Srikrishna* has presented the diversity of the life forms as a single unit in the eleventh (11/16, 23) and thirteenth chapter (13/13) of the *Geetaa*. The summary of the above three *sslokas* is as follows:

- ♦ He (God) has endowed with numerous arms, hands, thighs and feet on all sides; many bellies and heads in all directions with innumerable mouths, teeth, eyes and ears all around, extended in countless forms; stands pervading all the universe (globe) (*Geetaa* 11/16, 23; 13/13).

Modern science has searched out the number of species identified on the earth, which stands at 1.7 million-both plants and animals (Total Vertebrates-62,305 + Total Invertebrates-1,305,250+ Total plants-321,212+ Total Others that is, Lichens, Mushrooms, Brown algae-51,563= 1,740,330 Total species) For details refer Osborn 2010. Biologists have yet to describe many more species still unknown to mankind. So the number of species known to science increases substantially every year. The evolution and expansion of the biodiversity can be well imagined from the above data in conformity with the *Geetaa*'s presentation. More to say, if the life form numbers of each species are added to this table, we can not comprehend their presence on the globe. For example, man- *Homo sapien* is one species amongst the 5490 mammals. The present world human population is 702 crores, 50 lakhs, 71 thousand 966 as on 11.07.2011 the world population day. Out of this, India has 122 crores, 2 Lakhs. The reproduction rate of human beings due to self imposition is under control to some extent. But, there is no control over the population growth of other plants and animals. No doubt, many of the flora and fauna are under threat, endangered, on the verge of extinction or have undergone extinction due to different paleoecological causes and other negative human activity. Simultaneously the nature has its own natural control over the population growth to maintain the balance. Yet the biological principle "struggle for existence and survival of the fittest" operates independently to support the population growth.

Srikrishna has said:

"He (*Paramaatmaa*) exists outside (*bahih*) and within (*antah*) all beings, the inanimate (*achara*) and also the animate (*Chara*); because of his subtlety (*Suukhma*); he is incomprehensible (*avijnneyam*); He is for (*duurastham*) and near (*antike*) (13/15)."

From environmental point of view (away from spiritual view) the above *ssloka* is very significant. His subtlety refers to the microbial world includes the virus, bacteria, algae, fungi and other micro-organisms. Before the invention of microscope we had little knowledge about them. The word incomprehensible is rightly used for them. He is inanimate refers to the plant diversity, and animate-the animal world. He exists outside, speaks of the external biodiversity around us (any being with whom we are associated)

and His dwelling within all beings refers to the parasitism and mutualism relationship between species. 'He is far and near'- covers the plants and animals away from us in forest, sea, desert, mountains and snow covered areas with whom we are not acquainted (might have studied about them) and 'He is near' refers to the biodiversity-close to our life style'.

The earth, we live upon is a giant ecosystem where the abiotic and biotic components are constantly acting and interacting upon each other bringing forth structural and functional changes in it. The globe as an ecosystem can be divided into artificial subdivisions such as terrestrial ecosystem (forest, desert, grass land), man made ecosystem (crop lands, planed vegetation) and aquatic ecosystem (fresh water, marine). The unit ecosystems may be small or large are simply separated from each other with time and space. Functionally they all are indeed linked with each other, forming as an integrated whole-the vast ecosystem biosphere. There exists practically no functional boundaries between them. Virtually, the countless forms of the divinity as reflected in *Geetaa* (11/16, 23; 13-13-discussed earlier) in one form refers to the vast biosphere.

Srikrishna has said:

- ♦ "He is undivided (refers to global biosphere) and yet seems to be divided in beings. He is to be known as the supporter of beings (as source of energy and ecological factors). He devours and he generates (refers to the continuous creation and destruction of life forms) (13/16)."

DISCUSSION

The *Geetaa* is a blending form of *Ssruti* and *Smruti*. The *Unapnisahads* have their origin in the Vedas. They are 108 in number. The *Geetaa* is equal to that of the ancient *upanisahads*. The glory of *Geetaa* is unlimited which embodies the supreme spiritual mystery and secret. It contains the essence of all four Vedas, as claimed (Padhy 2013b).

Smruti refers to *Dharma Ssastra* (ethical law books) discussed earlier. The religio-social codes undergo changing with the changes in the order of the society as per time, place and circumstances. Accordingly the *smruties* are forwarded periodically by different *smruti* writers (like Manu, Goutama, Yagnyabalka, Sataatapa, etc.) to meet the social needs. *Geetaa* is a

collection of spiritual laws of eternal order and righteousness (*ssruti*) and also deals with duties of man and problems pertaining to life and society (*smruti*).

Drawing the *ssruti* and *smruti* to this discussion and tracing the root of *Geetaa* in them, is intended to support the new concept “*Dharma of Ecology*” forwarded by Dr. T.N. Khoshoo, the eminent environmentalist. While delivering foundation day lecture on “Man in nature-past, present and future”, at the National Museum of Natural History (NMNH) on the occasion of the World Environment Day, June 5th, 1989. He put forth this concept with the following basic principles:

- (i) Protecting and augmenting regenerability of life-support system (this could be accomplished by nurturing and protecting renewable resources, conserving non-renewable resources and avoiding waste and having economy of scale);
- (ii) Fair-sharing of resources;
- (iii) Bringing about awareness regarding concealed social, economic and environment costs of consumerism;
- (iv) Willingly adopting frugality and fraternity as a sustainable way of life;
- (v) Meeting genuine social needs by blending economic and environmental imperatives; and
- (vi) Halting and reversing the arms build-up.

According to him there is a need to have global ethics or a *Dharma* of ecology starting from an individual, to meet the various threats to our environment. This needs Environmental education which has a fundamental role to play in motivating people to adopt environmental friendly practices. Starting from grass root levels environmental education should involve all sections of our society and should create a general awareness concerning environmental problems. People should be motivated to conserve resources, protect environment and avoid extravagance. There should be understanding and co-operation among people to face ecological issues. Care should be taken to conserve indigenous knowledge, traditions and culture friendly attitude towards the environment.

There is no doubt that the world environment has deteriorated. Unlimited exploitation of nature by man has disturbed the delicate ecological balance between living and non-living

components of biosphere. The unfavourable conditions created by man is a threat for his own survival and also other living organisms. But in the present context, we have to face this problem. No need of looking back. We have to march forward to solve these problems. Why delay?

Srikrishna tells Arjuna on the battle field (2/3):

“Yield not to unmanliness, O Partha, it is not worthy of you; shaking off this mean faint-heartedness, arise, O scorcher of foes”.

Let us go on bravely. Let us not expect success in a day or a year. Let us set right our environment and save the biodiversity with the vedic spirit: Arise, awake and stop not till the goal is reached.

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