

Buddhist response to global warming & Environmental Protection: Ideology, Methodology & Dissemination

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With the realization of danger of increased global warming and consequent environmental crisis, religions of the world extended their help to reduce anthropogenic activities to save the environment. Buddhist Asia and the west felt unprecedented upsurge with the slogans like ‘*Tham laay paa khee tham laay chaat* (To destroy the forest is to destroy the nation)’¹ and ‘*Sentient beings are number less, I will do the best I can to save them*’.² These environmental movements perceive that the modern industrial world and its complex technological spectrum have created peculiar socio-economic institutions that lead to fundamental separation between human and nature. Such stratified separation reflects a fragmented world view of universe that is essentially disastrous. The anthropogenic actions are deteriorating the climate that is leading to ‘Inadvertent Climatic Modification’ or global warming. Due to increasing concentration of green house gases produced by human activities global

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1. Susan M. Darlington. ‘Tree Ordination in Thailand’ p.202, in Stephanie Kaza & Kenneth Kraft (ed.) *Dharma Rain: Sources of Buddhism Environmentalism*, Boston: Shambala Press, 2000

2. Joanna Macy. ‘Buddhist Vows for Guardianship’ in Nuclear Guardianship Project, *Nuclear Guardianship Forum*, 1 (Spring, 1992):2, pp. 492-494

warming is increasing and the average temperature of the atmosphere has risen from 0.4°C to 0.8°C since the last 100 years. The Intergovernmental Panel on Climate Change (IPCC) has pondered over a range of issues pertaining to global warming and its possible solutions. In 1992 the UN conference on Environment and Development at Rio de Janeiro set up UNFCCC (United Nations Framework Convention on Climate Change) which recommended specific target for reduction of emission in 1995 at the Berlin conference. In 1997, Kyoto Protocol was signed by 192 parties in Japan. At the 15th UNFCCC conference held in 2009 at Copenhagen, an accord was signed by 140 nations to reduce carbon emissions. It was further modified in Cancun in 2010 to expedite the ongoing processes. Buddhists are extending all their help to solve such anthropocentric action and have an energetic engagement by formulating appropriate socio-ethical practices. Since the 1970's, active participation in environmentalism could be seen in the Buddhist world. In countries like Thailand, environmentalism has been identified as the exclusive movement against government policies for unplanned industrialization and consequent deforestation. In other Asian countries such as Sri Lanka, Vietnam, and Cambodia, environmentalism has been embedded in their broader socio-economic programmes. In the west, especially in the USA, countries have an exclusive ecology movement incorporating Buddhist virtues and rituals. Ideologically, environmentalism in Thailand and Sri Lanka has a Theravada orientation, whereas in the west and other Asian countries, environmentalism is tilted toward Mahāyāna and Vajrayāna principles. Each of such movements seeks inspiration from Buddhist tradition of the past to engage it in modern problems like deforestation, global warming, and rising pollution.

In Thailand, environmentalism began like national uprising in response to the Thai government's aggressive development agenda. Early industrial development of Thailand was planned on forest based industries and excessive logging by the companies that led to massive deforestation. Its repercussion could be seen in Thai society in the form of floods, drought, and famines. The forest cover in Thailand dwindled from 72 percent of total land in 1938 to 53 percent in 1961 and further restricted to 29 percent in 1985. In 2003 it was discovered that forest cover does not exceed

beyond 15 percent of total area of Thailand.³ Forests are precious natural resources of Thailand and early industrialization of Thailand was based on the logging industry until a ban was imposed in 1989, when 300 people died in a catastrophic flood permeated by deforestation and soil erosion. Local people living in forests and peripheral areas were blamed for the flood due to their primitive shifting cultivation. It was recommended that these people should be rehabilitated and engaged in more productive and environment friendly pursuits.⁴ However, people have been living in the forest for thousands of years and their livelihood and habitation are strictly on a nature-man-spirit complex which endures sustainable life and mutual respect. Some monks and scholars realized that it was not crude tribalism or techniques adopted in forest zones, but ill-conceived industrialization was responsible for the damage. This can be understood as seed of environmentalism in Thailand. Nevertheless monks did not respond spontaneously as they had been involved in development schemes since early nineteenth century. In the nineteenth century, king Mongkut or Rama IV (1851-1868) globalized the Thai economy and accentuated Buddhist *samgha* to legitimize his plans for development. In the 1950's and 1960's Sarit aggressively adopted intensive development policy through community development and missionary campaign engaging monks. Thai plans for development are based on '*thammathud*' in which monks were sent as missionaries to politically fragile and economically backward border provinces and '*thammacarik*' through which monks were assigned function of public welfare to work among minority hill people for transforming them from animism to Buddhism and integrating them into national main stream. When the National Economic and Social Development Board (*sa-pa-pat*) of Thailand conceived the first National Economic Development Plan in 1961, the government banned Buddhist monks propagating '*santtuthi*' as a virtue of life because they believed that it would hurt the rising market demand, consumerism, and

3. Philippa England. 'UNCED and the Implementation of Forest Policy in Thailand' pp.53-71, in Philip Hirsch (ed.) *Seeing Forest for Trees: Environment and Environmentalism in Thailand*, Chiang Mai: Silkworm Books, 1996

4. Susan M. Darlington. 'Buddhism & Development: The Ecology Monks of Thailand' pp.101-102, in Christopher S Queen, Charles Prebish & Damien Keown (ed.) *Action Dharma: New Studies in Engaged Buddhism*, Routledge: London, 2003

consequently industrialization. Some monks argued against the government's plea and asserted that the teachings of the Buddha could contribute real human progress based on *prajna* rather than material accumulation.⁵ Some of the monks who were working in the rural areas realized that a bundle of development programmes taken by Thai government was not oriented to real development of the nation and they resented such plans. Their heightened consciousness for nation and forests caused widespread protest in Thailand first in the 1970's as 'Development Monks' (*phranak phatthana*) and then in the 1980's as 'Ecology Monks' (*phranak anuraksa*).⁶ The 'Development Monks' contemplated the adverse impact of growing consumerism and dependence of agricultural community on market forces. They envisaged new policies and programmes for rural community conducive to their local requirements and demands. Phra Dhammadilok founded a NGO 'Foundation for Education and Development of Rural Areas' in 1974 in Chiang Mai for exploring possibilities of sustainable development without endangering forest and economic resources.⁷ The first incident happened in 1985 when Thai monks protested against government's proposal to build a cable car in Doi Suthep hills to connect Doi Suthep and Pui National Park in Chiang Mai. Doi Suthep is an important pilgrimage centre having Wat Pra That containing relics of the Buddha. Phra Phothirangsi, head of *samgha* of Chiang Mai protested against installation of cable car by articulating link between preservation of forest and Buddhism.⁸ Environmentalism received a major boost in 1988 when the Thai government decided to shelve the project of Nam Choen in the Kanchanaburi province of Thailand

5. Pipob Udomittipong. 'Thailand's Ecology Monks' P.191, in Stephanie Kaza & Kenneth Kraft (ed.) *Dharma Rain: Sources of Buddhist Environmentalism*, Boston: Shambala Press, 2000

6. Ibid. pp.97-99

7. Jonathan, Rigg. 'Counting the Costs: Economic Growth and Environmental Change in Thailand' pp.8-9, in Jonathan, Rigg. (ed.) *Counting the Costs: Economic Growth and Environmental Change in Thailand*, Singapore: Institute of Southeast Asian Studies, 1995

8. Somboon, Suksamran. "A Buddhist Approach to Development: The Case of 'Development Monks' in Thailand" pp.26-48, in Lim Tech Ghee. (ed.) *Reflections on Development in Southeast Asia*, Singapore: ASEAN Economic Research Unit, Institute of Southeast Asian Studies, 1988

after strong protest by Thai monks, local groups, farmers, and foreign environmentalists.⁹ When logging companies did not stop cutting the forest, Phrakhru Manas Nathepitaka, abbot of Wat Bodharma organized passive resistance in 1988 but his protect did not fructify. Then he came with the idea of tree ordination to protect the forest.¹⁰ The *samgha* authorities reprimanded Manas for deviating Theravāda practices but he argued that people must have privilege in managing the local resources. The teaching of the Buddha could be drawn upon to protect forests and the interest of the people.¹¹ These environmental movements have many dimensions imbedded into material and ideological virtues. It focuses on multifaceted ideas coherent with certain socio-economic issues covering legitimization of resources.¹² These ‘Ecology Monks’ protect forests by performing rituals and ordination on them with an ecological interpretation. In spite of small numbers and restricted approach, their efforts paved the way for a broader horizon of environmentalism in Thailand. They reinvented the Buddha’s teaching to solve problems like environmental degeneration and global warming. Sulak Sivaraksa uses the term ‘interdependent’ in place of ‘dependent origination’ and propounds that the doctrine of interdependent co-arising is the beginning of Buddhist understanding of nature.¹³ Ideologically Thai environmentalism is more Theravāda oriented but modified, adjusted and transformed for proper engagement of Buddhist virtues with modern problems like environmentalism, deforestation and global warming. The most popular ritual adopted by the monks was ‘ordination of tree’ to protect them from

9. Chayant, Pholpoke. ‘The Chiang Mai Cable Car Project: Local Controversy Over Cultural and Eco-Tourism’ pp.262-277, in Philip Hirsch & Carol Warren, (ed.) The Politics of Environment in Southeast Asia: Resource and Resistance, London: Routledge, 1998

10. Susan M. Darlington. ‘The Ordination of a Tree: The Buddhist Ecology Movement in Thailand’ *Ethnology*, Vol.37, No. I (Winter.1998), pp.1-15, <http://www.jstor.org/stable/3773845>.

11. Pipob. Udomittipong. op. cit. pp.193-195

12. Philip, Hirsch. ‘Environment and Environmentalism in Thailand: Material and Ideological Bases’ in Philip Hirsch (ed.) *Seeing Forest for Trees: Environment and Environmentalism in Thailand*, Chiang Mai: Silkworm Books, 1996

13. Sulak, Sivaraksa. ‘The Religion of Consumerism’ pp.181-182 in Stephanie Kaza & Kenneth Kraft (ed.) *Dharma Rain: Sources of Buddhist Environmentalism*, Boston: Shambala Press, 2000

cutting down. This practice itself was not coherent with Theravāda practices because tree cannot be given *pabajja*. But for mass appeal and fast propaganda of Buddhist environmentalism, certain Buddhist monks adopted this mechanism even against the wishes of Thai Buddhist *samgha*. Some monks were even punished for breaking the rules of the *samgha*. It is ponderable that methodology of ecology movement has been indigenously developed or inspired by other movements. In early 1970's India faced a wider environmental movement known as *Chipko Andolana* (Chipko Movement) that practised a Gandhian method of *satyagraha* and non-violent resistance against cutting down the tree by hugging it. It began in 1970's in Garwhal Himalayas of India with growing awareness towards rapid deforestation. Probably environmentalism in Thailand has some impact of this movement. The Thai government and supporting *samgha* was initially adamant to support industrialization heavily based on logging companies. When Phra Prajak Kuttajitto, a monk of Dong-yai forest in Northeast Thailand performed tree ordination in 1989, he was threatened with imprisonment and was forced to disrobe.¹⁴ In 1991, Thai Buddhist monk Phrakhru Pitak Nanthakhun organised a tree ordination ceremony in Nan province of Thailand. The ritual was performed by twenty monks and attended by 200 villages, district officials and journalists. They sanctified and protected community forests of ten adjoining villages. The hour long ceremony included chanting of sermons, sanctification by water, and wrapping of *civara* around the largest remaining tree in the forest. The village headmen drank holy water and took a pledge to protect the forest. He also performed *phaa paa* ceremony in which he demanded donation of tree seedlings for reforestation programmes. In May 1993, a ceremony was performed to rejuvenate the life of Nan river. They organized a conference to highlight the problems of global warming and pollution. A fish sanctuary was established at the site of ceremony and by 1999 over thirty nine community forests, and a hundred fish sanctuaries have been established by Phrakhru Pitak's NGO

14. Ibid. pp.199-200

‘Love Nan Province Foundation’.¹⁵ Phrakhru resisted a government plan to plant eucalyptus trees for stimulating the economy in Nan, which was stopped due to his protest. He also started ‘Love for Nan River Project’.¹⁶ Phra Somkit innovated a new method to restrict deforestation around his village. In 1990, he adopted the *bindbat* practice for forest regeneration, which is a traditional practice of alms giving by laities to earn merit. Somkit demanded donation of lands by the villagers. On these fallow lands, he practiced agriculture, domestication, fisheries, and poultry without using any chemical manure and pesticides. His intention was to demonstrate to fellow villagers the benefits of traditional agriculture without endangering any natural resources.¹⁷ The ‘Ecology Monk’ redrafted human relationship with nature. Their engagement with little tradition of Thailand for a universal cause viz. Environmentalism shows dynamic social process through which small groups of monks challenge and change the dominant trend. The non-violent *satyagraha* technique adopted by Thai monks reminds pan-Asian impact of *satyagrah* and boycott adopted by Gandhi in anti-colonial non-cooperation movement (*Asahayog Andolana*) in 1920s.

Another Theravada based movement was *Sarvodaya Shramadana* of Sri Lanka. Though its outlook was not totally towards environmentalism, but was imbedded in its socio-economic virtues to regenerate society, forestation and sustainable use of local resources for growth with the help of the Buddha’s teachings was the main motive of *Sarvodaya*. It was blended with Gandhian tools of *satyagraha*, trusteeship and traditional Buddhist virtues. The aim of A. T. Ariyaratne was to establish prosperity in war-ridden society by strengthening socio-economic values. He rejected western economic patterns and recommended simple and affordable life styles.¹⁸ He encouraged spiritual, mental, social, and intellectual values

15. Susan M. Darlington. ‘Not Only Preaching-The Work of the Ecology Monk Phrakhru Pitak Nanthakhun of Thailand’ *Forest, Trees and People*, News Letter, Vol.34 (September, 1997), pp.17-20

16. Pipop, Udomittipong. op. cit. pp. 193-194

17. Susan M. Darligton. ‘Buddhism & Development: The Ecology Movement of Thailand’ p.106

18. A.T. Ariyaratne. *The Power Pyramid and the Dhammic Cycle*, pp.147, 157, Moratuwa: Sarvodaya Vishwa Lekha, 1988

for development by planning peace marches or walk on model of Gandhi's *padyatras* (peace marches).¹⁹ The key philosophy behind them was the people's orientation towards peace and harmony and to engage people by drafting and using the Buddha's approach to tackle problems.²⁰ He also organized peace *samadhi* days for meditation and invited Sinhalese, Buddhists, Christians, and Muslims.²¹ He underlines spiritual unity of all religions for achieving peace and speaks of universal acceptability of spiritual laws imbedded in historic religions.²² In *Sarvodaya*, the entire village was gathered and groups were formed for productive assignments. These groups were emboldened to articulate their own requirements by which those means could be achieved. It was a Buddhist way to maintain and supplement the existing resources, and to eradicate the vicious circle of poverty and loss of dignity. The *Sarvodaya* clearly attempts to replicate the democratic ideals of *samgha* particularly those principles that recommends shared values and decision making. This model was designed by Ariyaratne with community of villagers for their welfare.²³ *Sarvodaya* was transformation of *dhammic* action into karmic action for benefit of larger section of society of Sri Lanka. The difference between Thai ecology movement and *Sarvodaya* was that in Thailand the monks introspected first about the ill effects of rapid industrialization and consequent ecological damage. In Sri Lanka the movement was dominantly in the hands of laities. The Thai movement's purpose was to change the laws and mode of economic pattern, while in Sri Lanka it was a socio-economic regeneration starting from rural to urban areas. In Thailand, it was parochialization of Buddhist wisdom from urban to rural and in Sri Lanka the percolation was through process of universalization from little tradition to great tradition.

19. George D. Bond. 'Sarvodaya Shramadana's Quest for Peace' p.129, in Christopher S Queen, Charles Prebish & Damien Keown (ed.) *Action Dharma: New Studies in Engaged Buddhism*, Routledge: London, 2003

20. George D. Bond. op. cit. p. 121

21. Joanna, Macy. 'The Sounds of Bombs Not Exploding' pp.53, *Yes* (Summer), 2002

22. A. T. Ariyaratne. op. cit. pp.176-177

23. Detlef, Kontowski. *Sarvodaya, the Other Development*, pp.44-45. Delhi: Vikas Publishing, 1980

Mahāyāna and Vajrayāna also played vital role in the formation of environmental ethics specially in the west. Chinese, Taiwanese, Japanese, and Tibetan migrants and diasporas in USA and many parts of Europe brought in Buddhism, its tradition, and rituals in the western society. For the colonial government in many parts of Buddhist Asia, intermingling of troops during two world wars accentuated exchange of ideas between the east and the west. The environmentalism found in Mahāyāna literature *Sadharmapundirika Sutra* (*Lotus Sutra*), *Avatamsaka Sutra* (Chinese *Hua-yen Sutra*), and Zen nature poetry specially of Dogen and Daito have profound impact on western environmentalism. The *Sadharmapundirika Sutra* has various references of nature those of which are quoted by later scholars in shaping up of environmental ethics. For example

*‘The equality of the Buddha’s preaching
is like of rain of a single flavour;
But depending upon the nature of living being.
The way in which it is received is not uniform,
Just as various plants and trees
Each receive the moisture in a different manner.’*²⁴

In a similar fashion *Avatamasaka Sutra* compares earth, tree, ocean and water with various attributes of the Buddha.

*Just as the nature of earth is one
While beings each live separately,
And the earth has no thought of oneness or difference,
So the truth of all Buddhas.*²⁵

Dogen (1200-1253CE) was the founder of Soto sect of Zen and his major work ‘*Tresury of the Eye of True Dharma*’ talks about non-duality among the natural elements. His ‘*Mountain and Water Sutra*’

24. Lotus Sutra- Nature as Teacher or Refuge, p.47 in Stephanie Kaza & Kenneth Kraft (ed.) *Dharma Rain: Sources of Buddhist Environmentalism*, Boston: Shambala Press, 2000,

25. Hua-yen Sutra p.49, in Stephanie Kaza & Kenneth Kraft (ed.) *Dharma Rain: Sources of Buddhist Environmentalism*, Boston: Shambala Press, 2000

became a scripture of contemporary environmentalism.²⁶ Daito Kokushi (1282-1337CE) was Zen master of Renzai sect and founder of Doi toku ji monastery. He was renowned for his *haiku* (nature) poetry.

*No umbrella, getting soaked
I will use the rain as my raincoat.*²⁷

Basho (1664-1669), the great *haiku* poet of Japan took inspiration from banana plant growing outside his hut. He used nature's various elements as synonyms for public life.

*The clouds come and go
Providing rest for all
The moon viewers.*²⁸

Lafcadio Hearn (1850-1904) travelled Japan and found many species and plants demonstrated to depict the body organs of the Buddha.

*'Rock moss was the fingernails of the Buddha. Swamp cabbage was Bodhidharma's plant. A certain type of oak was that of the Arhat. Grasshoppers were creatures upon which the blessed dead rode back to town for their midsummer visits with pleased relatives. The Japanese warbler was imagined to be calling out 'hok-ki-kyo' the title of holy Lotus Sutra. Even the hammer-head shark was referred to as a priest of the Nembutsu chant because its 'T' shaped head resembled the mallet used to strike a gong during their prayers.'*²⁹

The effect of these teachings could be seen in creation of early environmentalists like Thich Nhat Hanh and Gary Snyder. Environmentalists like Joanna Macy, John Seed, Atikin Roshi may be

26. Dogen. Mountain and Water Sutra, p.65 in Stephanie Kaza & Kenneth Kraft (ed.) Dharma Rain: Sources of Buddhist Environmentalism, Boston: Shambala Press, 2000

27. Daito. Poetries of Daito, pp. 77-78, in Stephanie Kaza & Kenneth Kraft (ed.) Dharma Rain: Sources of Buddhist Environmentalism, Boston: Shambala Press, 2000

28. Donald H. Shively. 'Basho- The Man and the Plant', pp.146-161, Harvard Journal of Asiatic Studies, Vol.16, 1953

29. Lafcadio. Hearn. 'Buddhist Names of Plants and Animals' pp. 202-213, in Kenneth Rexorth. The Buddhist Writings of Lafcadio Hearn, Santa Barbara: Ross Erikson, 1977

other examples who sought inspiration from them. Gary Snyder wrote about Dogen that his experience of nature by wandering into cedar and sequoia forests of mountain Hiei in Kyoto which was the center of Tendai sect of Buddhism made him true exponent of nature. His '*Mountain and Water Sutra*' shows a method to respect the laws of nature without pondering over purity and pollution, natural and artificial. Snyder says that Dogen's attitude for environment has been found not only in literary context but also in arts of Vajrayāna iconography which personifies-

*'Mountain and Water is the rupas – images of Fudo Myo-o (Immovable Wisdom King) and kannon Bosatsu (The Bodhisattva who watches the waves), Fudo is almost comically ferocious looking with a blind eye and a fang, seated or standing on a slab of rock and enveloped in flames. He is known as an ally of Mountain ascetics. Kannon (Kuan-yin, Avalokitesvara) gracefully leans forward with her lotus and vase of water, a figure of compassion. The two are seen as 'buddha –work partners: ascetic, discipline, and relentless spirituality balanced by compassionate tolerance and detached forgiveness. Mountains and waters are dyad that together make wholeness possible.'*³⁰

John Daido Looi says that Dogen was a great aspirator of nature who established his monastery in deep mountain on the bank of the nine headed Dragon river. Dogen ascribed mountains and rivers as *dhammadhatu* and composed majority of his work on cliff of a mountain. He denotes mountains and rivers as *samsaric* cycle. By taking inspiration from Dogen, Looi founded '*Mountain and River Order*' near a mountain with a cross section of two rivers-the Esopus and the Beaverkill.³¹ Gary Snyder cultivates a bridge between east and west and his poetic identification with nature was influenced by *Hua-yen* School. His view on nature represents the transition of idea from anthropocentrism to consideration

30. Gary, Snyder. 'Blue Mountain Constantly Walking' P.128, in Stephanie Kaza & Kenneth Kraft (ed.) *Dharma Rain: Sources of Buddhist Environmentalism*, Boston: Shambala Press, 2000

31. John Daido Looi. 'River Seeing the River' pp.142-144, in Stephanie Kaza & Kenneth Kraft (ed.) *Dharma Rain: Sources of Buddhist Environmentalism*, Boston: Shambala Press, 2000

for all living beings including non-humans.³² He traced the roots of modern environmental problems in modern technology and science, which is devoid of ‘pre modern technology’. He argues that intense and aggressive technological progress and scientific inquiry have nurtured anthropogenic activities harmful to nature.³³ His poetry was influenced by *haiku* poetry of Zen Buddhism and preaches about environmental deterioration. Thich Nhat Hanh is also an off shoot of Mahāyāna school who initially began with political activism in the Vietnam –USA war. But later on emphasised upon the environmental concerns and other socio-economic problems. In the 1960’s he visited USA for higher studies, and in 1963, submitted representation to United Nations for human rights violations. During the wake of Vietnam-USA war, he founded *Tiep Hien* Order in 1966 to alleviate sufferings and to engage the organization in social and environmental causes. The term ‘*Tiep*’ means in touch with and ‘*Hien*’ represents to discover in the present context.³⁴ The motive of the organization was to introspect and act upon the present. The fourteen precepts drafted for the *Tiep Hien* order envisage vision and compassion for the earth and the other form of beings.³⁵ Vietnam’s protest against war was imbedded on the *Bodhisattva*’s sacrifice for human welfare. Taking the example of the *Bodhisattva*, monk Thick Quang Duc sacrificed himself in meditating posture in the street of Saigon in 1963. It was not only Thich Quang Duc but thirty six other monks and a lay woman died voluntarily protesting against war.³⁶ These sacrifices shaped up the method of environmentalism that was innovated by Thich Nhat Hanh, who adopted meditation and awareness programmes to popularize his vision. His *gathas* with environmental values became a popular method to spread message of tolerance and endurance with nature. Hanh established

32. Hwa Yoi Jung & Peter Jung. ‘Gary Snyder’s Ecopiety’, *Environmental History Review*, Vol.14, No.3 (Autumn), 1990, pp.74-87, <http://www.jstor.org/stable/3984727>, accessed. 21-03-12

33. J.Baird Calicott. ‘The New New (Buddhist?) Ecology’ p.1-3, *Journal for the Study of Religion, Nature and Culture*, Vol.2, No.2 (2008)

34. Joan Halifax & Marty Peale. ‘Interbeing: Precepts and Practices of an Applied Ecology’, pp.5-8, www.upaya.org/roshi/dox/interbeing, Accessed. 1-5-2013.

35. *Ibid.* pp.13-16

36. Christopher S. Queen & Salle B. King. (ed.) *Engaged Buddhism: Buddhist Liberation Movement in Asia*, pp.1-2, New York: State University of New York, 1996

Buddhist retreat monasteries and spiritual centres which encourage others to engage people in social action and to cope with problems of tumultuous world. He offers meditation retreats for environmentalists that open the possibilities of sitting and working meditation to people who have hectic involvement in political activities.³⁷ Hanh further says that environmental perspective always reflects Buddhist teaching of interdependence. If man is anthropocentric, then he is restricted to be real. The human existence and growth also depends upon non-humans, so it is necessary to respect them. Though humans may be distinguished from other animals, interdependence of humans, non-humans, and other constituents are necessary for our survival and growth.³⁸

In the USA Buddhist environmentalism took shape in 1950s when Gary Snyder started connecting Buddhist teachings with ecological activism. In 1970's Green Gulch Zen Centre was opened for organic farming and gardening. The Buddhist Peace Fellowship was started in 1978 to begin environmental studies. In 1980's Buddhist scholars and monks started expressing concerns over ecological crisis and related awareness programme.³⁹ Joanna Macy synthesized Buddhism with ecological ideas and concerns. John Seed with Joanna Macy founded 'Council of All Beings' which demonstrates rituals, posters, visual programmes to show interconnectedness between earth and other life forms.⁴⁰ Joanna Macy is one of the most acclaimed thinkers on Buddhist environmentalism. She is the author of 'Nuclear Guardianship Project' which flourished between 1991-1994. Joanna proposes creation of a guardianship council for rehabilitation of radioactive nuclear wastes and

37. Bill Devall. 'Deep Ecology and Political Activism' p.390, in Stephanie Kaza & Kenneth Kraft (ed.) *Dharma Rain: Sources of Buddhist Environmentalism*, Boston: Shambala Press, 2000

38. Thich Nhat Hanh. 'The Sun My Heart' p.88, in Stephanie Kaza & Kenneth Kraft (ed.) *Dharma Rain: Sources of Buddhist Environmentalism*, Boston: Shambala Press, 2000

39. Erin, Volhelm. 'Universal Chainsaw, Universal Forest' pp.284-285, in Stephanie Kaza & Kenneth Kraft (ed.) *Dharma Rain: Sources of Buddhist Environmentalism*, Boston: Shambala Press, 2000

40 Wes, Nesker. 'The Rain Forest as Teacher: A Conversation With John Seed' pp. 286-287,, in Stephanie Kaza & Kenneth Kraft (ed.) *Dharma Rain: Sources of Buddhist Environmentalism*, Boston: Shambala Press, 2000

uses such places for meditation and awareness.⁴¹ This organization had a deep impact and some of its ideas have been included in minutes of the office of Environmental Management, US Energy Department.⁴² Macy fought against nuclear wastes and in 1978, she filed a petition against the Virginia Electric Power Company but lost it. In 1988 she began to study the impact of nuclear wastes with the support of nuclear engineers, educationists, and environmentalists and found the impact disastrous. According to them 'Not in my Backyard, NIMBY Syndrome' does not help a particular country or region. After all, it affects our mother earth.⁴³ Her Nuclear Guardianship Project uses the poisonous fire of nuclear reactors as their teacher, and it puts human beings in league with future generation. It is a network of citizenship engaging in development of nuclear policies and practices which reflects the responsibility of the people to sustain and save the present and future generation.⁴⁴ Kenneth Kraft speaks about 'nuclear ecology' for sustainable use of nuclear energy and safe disposal of nuclear wastes. It emphasizes upon long term management which may include radiation ecology, industrial ecology, etc.⁴⁵ Gary Snyder also talks about the danger of nuclear wastes and its safe disposal. Thich Nhat Hanh tells that nuclear wastes are most hazardous type of garbage and attempts to connect mindfulness with nuclear wastes, which do not require 400 years to become a flower but 2,50000 years to decay. If it continues then the earth will become an impossible destination for our survival.⁴⁶ The Dalai Lama also suggests the relinquishing of Tibet for production of nuclear weapons and tests

41. Bill, Devall. op. cit. pp.379-408

42. Kenneth, Kraft. 'Nuclear Ecology and Engaged Buddhism' pp.297-301, in Stephanie Kaza & Kenneth Kraft (ed.) *Dharma Rain: Sources of Buddhist Environmentalism*, Boston: Shambala Press, 2000

43. Wes, Nesker & Barbara Gates 'Guarding the Earth: A Conversation With Joanna Macy' pp.388-390,, in Stephanie Kaza & Kenneth Kraft (ed.) *Dharma Rain: Sources of Buddhist Environmentalism*, Boston: Shambala Press, 2000

44. Bill, Devall. op. cit. pp.388-390

45. Kenneth, Kraft. op. cit. P.393

46. Thich Nhat Hanh. 'The Last Tree' pp.217-221, in Allan Hunt Badiner (ed.) *Dharma Gaia: A Harvest of Essays in Buddhism and Ecology*, Berkeley: Parallax Press, 1990

by China.⁴⁷ The United Nations Environment Programme indicates that it is the last generation of human population that can prevent complete destruction of human life on earth. The Buddhist eco-approach can make it possible to salvage the grim situation and pursue environmentalism with greater urgency and commitment.⁴⁸ In 1995, the Green Gulch Zen Center, San Francisco performed evocative multimedia ceremony to memorialize the fiftieth anniversary of bombing of Hiroshima and Nagasaki. A Zen group in Oregon put commendable effort to restrict 'poisonous fire' of radioactive nuclear wastes by adding one additional vow in traditional chanting for the Bodhisattva.

The poison fire lasts forever, I will do the best, I can to contain it.

*The Buddha way is unsurpassable, I will do the best I can to contain it.*⁴⁹

In April, 1994, about fifty American Buddhists celebrated Buddha's birthday at the Nevada nuclear test site with traditional chanting, recitation, and by exploring harmful impact of nuclear tests.⁵⁰ All such activism has not changed the status of nuclear tests and wastes, but it gives a cautious method with which to think about alternative energy sources that could harness energy without affecting the environment. The catastrophe of Chernobyl on 26 April, 1986 was a terrible nuclear accident. An explosion and poison fire released large quantities of radioactive particles in what was considered to be the worst nuclear accident in atomic history. The Fukushima Daiichi nuclear disaster on 11 March, 2011, which was hit by tsunami triggered by the Tohoku earthquake, also released substantial amount of radioactive materials. Such incidents remind us to adopt nature friendly energy sources. The reports of United Nations suggests that 25 percent of species residing in tropical forests may be extinct in next few decades if current trends of forest depletion and global warming continues. Use of non-renewable sources

47. The Dalai Lama. 'Five Point Peace Plan for Tibet' pp.288, 292., in Petra K. Kelly, Gert Bastian, & Pat Aiello (ed.) *The Anguish of Tibet*, Berkeley: Parallax Press. 1991S

48. Wes, Nesker. op. cit. P.288

49. Joanna Macy. 'Buddhist Vows for Guardianship' in Nuclear Guardianship Project, Nuclear Guardianship Forum, 1 (Spring, 1992):2, pp. 492

50. Kenneth Kraft. op. cit. p.395

like nuclear plants for production of energy and depletion of forest have been responsible for enormous emission of carbon dioxide and other green house gases contributing global climate change. USA is the largest emitter of green house gases with five percent of world's population and accounting for twenty two percent of emission of green house gases. China comes second with more than fifth of total world population and accounting for 14 percent of global carbon dioxide emission.⁵¹ This rate of emission could be reduced with alternative eco-friendly sources and Buddhist virtues can be helpful in this thought process.

Introspection of these ecological movements and programmes suggest that there are no united, coherent ecological Buddhist movements worldwide. Each of such movements emerges in a particular historical context when industrialization and development are confronted with traditional socio-economic structure and eroded the natural resources. Each of such movements has the willingness to confront the system by suggesting alternative models and policies. Their method could be summarized by three 'Ps' - Preaching, Petition, and Protest. The monks and laities engaged in environmentalist speak of deforestation, global warming in their preaching, conferences, and meditation camps. Through petition, they attract the attention of government, media and affected parties. Finally, they protest against harmful policies and practices adopted by government and industries.

The important aspect of these ecological movements is analytical construction of the problems with their proper solutions that permits to preserve common but different socio-religious stirrings throughout Buddhist Asia and in some parts of the west. It may share some essential features with traditional form of Buddhism, and it contains enough substantive differences unique to the modern era. Such movements offer unique interpretation of traditional Buddhism. Their most distinct innovation is the tendency to interpret Buddhist teachings in *samsaric* terms, which recommends a kind of mundane awakening that includes moral, cultural, economic, and political dimensions. It comprises of

51. Michael B. McElroy. 'Human as a Force for Global Environmental Change' pp.11-16, December, 10, 2005 Harvard University.

a wide range of individuals from diverse political background who are inspired by Buddhist values and derived by common cause of environmentalism and global warming. Their main motive is to lessen the suffering of the world by examining the problems and seeking solutions. Such engagements could take many forms –lobbying, civil disobedience, *satyagraha*, and litigation.

These movements demonstrate that scientific progress is meant to serve the real needs of the people, not the demands of markets or any economic system. It establishes a new type of relationship between people and nature that is based on co-operation, not of exploitation. It encourages people to replace mutual antagonism with solidarity and co-operation. For its metaphysical foundation must be brought into alignment with environmentalism which converts theory into action to remove suffering.