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Cosmology and Cultural Ecology as Reflected in Borobudur Buddhist Temple¹

By

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Abstract

Advancement in science and technology that has been achieved by human beings does not necessarily imply they are freed from environmental problems. Buddhism since the very beginning has been in harmony with nature; the Buddha was fond of nature; however, it is very little its sources speak about the interconnection between human and environment. The question of the significance of cultural ecology comes into prominent in these days as there has been increasing environmental problems happen. Borobudur Buddhist temple in Central Java contains some ideas or elements that can be used to cope with the problems mentioned. Interestingly, the whole body of the monument was inspired by the teachings of the Buddha and Buddhism in which the Causal Law having impetus in the theory dependent-origination

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(*Pratyasamutpada*) is reflected clearly in the reliefs of *Mahakarmavibangga* in *Kamadhatu* base level. For a better understanding of this law, the connection with cosmology in Mahayana Buddhism is discussed in brief. It is found that there are various natural elements were depicted and crafted by the artists in a high standard of art as the manifestations of the Buddha's teachings. Amongst the natural elements depicted here, tree, plant, or forest are dominant elements, which appear almost in all reliefs either in the main walls or balustrade. The relatedness amongst the elements is shown beautifully in complex relationship amongst them, and this has moral, aesthetical, spiritual, and ecological messages that need to be known for spiritual ascendance. When the interaction amongst them should be accomplished it is required an ethical principle as how to maintain harmony with those natural elements, animals and human beings for a better world order and happy life.

Key words: Borobudur, Mahayana Buddhism, cosmology, cultural ecology, science.

1. Introduction

Known as the biggest complex of Buddhist temple in the world, and the climax of Buddhist art¹, Borobudur monument has a huge number of reliefs on its walls reflecting the Buddha's life and Buddhism. The walls of its levels are decorated with reliefs, which are approximately 2,500 meters in length, and hundreds of Buddha statues. No doubt Borobudur temple is both forms of art and philosophy present altogether in natural setting. According to historians this temple was built by Sailendra dynasty (the ruler of mountain) of Central Java in 8th-9th century A.D. Notwithstanding, it shows how men and nature produced such high aesthetical, ethical, and ecological values of the Javanese in ancient Java immortalizing the faith and vision of the kings inspired by the Buddha. Being "a prayer in stone"² and landmark of Javanese art and culture its spiritual grandeur welcomes every visitor who wants to experience its beauty and magic.



Borobudur in green environment (Source: Impact Postcards)

Studies undertaken by scholars³ since it was found in 1814 by Sir Thomas Stamford Raffles have emphasized on the archaeological aspects, history, arts, and philosophy; whereas ideas of cultural ecology seems to get a little attention even neglected field of study. The reason, perhaps, is that Borobudur itself is already a form of art in nature made of tons of stone. From the beginning of the estab-

lishment, Buddhism had a positive attitude towards nature. The Buddha after his enlightenment, much time was spent in nature and associated with tree. Singh mentions that his birth at Lumbini as his mother grasped the branch of a sal tree, his early experience of states of meditative absorption beneath the rose apple tree, his Enlightenment beneath the Bodhi-tree, and his *Parinirvana* (death) between twins of sal tree⁴. Thus, the question of ecology or cultural ecology, which is supposed standing in between man and nature, is important to consider as far as Borobudur is viewed as harmonious blend of art and nature. It is there despite the fact that traditional Buddhist text seems to be very little direct reference to what would these days be called environment or ecological ideas. As remarked by Singh that Buddhist practices tend to disregard environment, because the monastic way of life idealized by Buddhism is environmentally very minimalist. Such neglect of comment concerning environmental values is not warranted, however, because the Buddhist scriptures are in fact rich with advice from the Buddha regarding environment values and they are applicable to monastic and lay life style alike⁵.

However, in these days of advanced telecommunication era, the questions about culturalecology seems to be getting important since there has been increasing gaps between human and nature, and also human and human. Massive advancement of science and technology has caused men alienated from self and nature. The relatedness of man and nature becomes less and less as problems caused by ecological imbalance exists almost in all countries. Joyadip (2008) mentions that we cannot divorce man from nature and his surrounding living creatures. Therefore, we have to understand our existence not as isolated ego but as part of larger body of the universe. Egoism generates negative emotions like greed, hatred or anger, and delusion (*raga, dosa, moha*) making us run after the wealth for fame and power, and for sensual gratification. As long as man is motivated by these drives, he can never feel safe and contented. Delusion blinds our eyes from seeing the Truth⁶. These are of course wrong ways of thinking and living, which are opposed by the teachings of the Buddha.

As far as Borobudur is taken as a representation of Buddhist *mandala* along with the huge reliefs of it in the view of Mahayana Buddhism, the ideas on cosmology, philosophy, and ecology become prominent aspects for which ideas of cultural ecology may be found. It is not merely a huge stone construction but a combination of art, philosophy, and nature. Natural environment is very obvious depicted in the reliefs of it.

To know the ideas of cultural ecology behind the rich reliefs of the Borobudur is an interesting issue needs to be attempted.

2. Objectives

This paper attempts to explore some elements of spiritual cultural ecology as reflected in the Borobudur Buddhist temple in Central Java, Indonesia. The data is taken from the reliefs of the temple, especially *Mahakarmavibangga* of the *Kamadhatu* level and interpretation is conducted to see some aspects of cosmol-

ogy and cultural ecology in them. These two domains are taken altogether on the view that both are interrelated; one cannot separate the discussion of ecology from its cosmology.

3. Representation of Mountain

For Hindus and Buddhists, mountain has always been associated with sacred place or abode of gods like that of Kailash for the Hindus in India, mount Semeru of Javanese, and mount Agung of Balinese. Mountain becomes point of concentration in religious practices. Borobudur temple is of no exception in this regard. With reference to the name Borobudur itself, which is still no conclusion of the meaning of this word, Nou and Frederic render it as “mountain of the accumulation of virtues in the ten stages (of the *bodhisattvas*)”⁷. For Javanese Buddhist and Mahayana Buddhism, mountains were important religious symbols. The Buddha often chooses to reveal important scriptures on mountain tops. Not only its shape is like mountain, its reliefs depict rich natural elements, like water, fire, earth, cloud, trees, plants, various animals, etc. like those found in mountainous areas. At the first sight, Borobudur looks like a mountain surrounded by some mountains in a far distance. Lokesh Candra describes it beautifully that Borobudur is situated in the heart of mountains, surrounded by volcanoes, picturesque amidst rice fields, bamboo groves, tall palms and chirping birds; it is a salutation in an imperishable rhythm of stone. Here we join generations of pilgrims in quest of the final meaning of freedom of the spirit overflowing into the bounty of the compassion of the Enlightened One⁸. It has rich symbolisms capsulizing deep philosophical ideas of Mahayana Buddhism. As said by Nou and Frederic, it is often associated with magic, a place where a mountain of stones are organised according to a perfect geometric figure intended to symbolize the universe⁹. It is the symbol of universe through arrangement of tons of stones, which was supported with subtle and deep philosophical ideas. Miksic opines that Mahayana Buddhism conceives the universe in terms of a complex system of three realms with a great mountain at the centre called Semeru. Each realm had a number of subordinate levels that were arranged hierarchically¹⁰. In the same ideas, Soekmono opines that *candi* Borobudur symbolizes the cosmic Mount Meru of Hindu and Buddhist cosmology and stands for the universe. He further remarks that other *candi* in Java are divided into three vertical sections, names with reference to the three spheres of the gods on Mount Meru: *Bhurloka*, “earthy sphere”, *Bhuvahloka*, “sphere of the air”, and *Svarloka*, “heavenly sphere”. These three levels of Borobudur identified by Stutterheim and deriving from Buddhist cosmology: the *Kamadhatu*, “realm of desire”, *Rupadhatu*, “realm of form, and *Arupadhatu*, “realm of formlessness”¹¹ in comparison of foot, body, and head parts of a human being. *Kamadhatu* forms the base of the monument whereas *Arupadhatu* is the upper most part of the monument. For a spiritual journey one should proceed from its base of the east gate, going around and up to the higher levels till the final *stupa*.

The first level *Kamadhatu* represents the world of senses – the desires and the passions. It is therefore the plane of the ego. Its world is linear, which is to say dualistic, ruled by cause and effect. Man is consequently the victim of his own desires as long as he fails to see the essence of reality and judges it on the sole evidence of his senses¹². This world is represented on the original base of the monument and hidden by the added plinth¹³, and thus it is invisible to those who wish to do pilgrimage. The main theme of the story depicted in various panels is karmic law or law of causal and effect. As a whole, the reliefs show the endless and repetitive cycle of birth and death, or expiatory punishment for actions considered bad and fortune rebirth for those considered just¹⁴. On reading the relief the initial action is generally presented on the right side of the panel, and its consequence (good or bad) on the left, as the reliefs are to be read in the direction of the *pradaksina*, or ritual circumambulation¹⁵. The messages depicted through the panels are inspired by the *Karmavibanga*, a popular Buddhist text describing the stages of deliverance from the bonds of action (*karma*). They are therefore illustrations of law of cause and effect *karma*¹⁶.

The second level or *Rupadhatu*, represents the world of form, the multiple self. It is a striking fact that the initiatory path of the pilgrim at Borobudur centres on this level in particular, comprising as it does four stories of galleries with thousands of reliefs illustrating the essential tenets of Buddhist philosophy¹⁷. A pilgrimage is now being isolated from the external world as he/she walks following the panels in the balustrade and starts focusing on the panels and reliefs. Nou and Frederic further states that while the first level, or *Kamadhatu*, represents the directly perceptible world, the second associates the multiplicity of the representations and the continuous aspect of the voyage with the discontinuity of forms. No longer is the experience localized on a single plane, but on a succession of planes where the relation of the one to many is constantly internalized... At Borobudur, as in all religious traditions, the voyage is a symbol of images relating to various states of being¹⁸. Gods, spiritual projection of the immanent Buddha, reside in the realm of appearance and form, *Rupadhatu*. They are placed in the points of compass and represented by the *jinas* on the balustrades of the galleries¹⁹.

The third level or *Arupadhatu* consists of three concentric circles around which sit seventy-two *buddhas* under their perforated *stupas*. The *buddhas* here are practically invisible from the outside. They can only be seen through the diamond-shaped or square opening into the *stupa*. These *buddhas* of circular terraces are symbols of the secret inner world, that is, a world stripped of form, at once present and hidden. These *buddhas* suggest formlessness. The third level, therefore, represents the state where being and non-being become one. Above is the great mass of enormous central *stupa*, rising to the final point, symbolic of being, of the conjunction of visible and invisible: the Absolute. At this high point there exists no concept or word to express reality. It is a realm of namelessness and formlessness, to become that which is²⁰.

Borobudur is constructed in the form of an upward spiral, with the tip of the *stupa* as its terminus. From the bottom consists of ten stages; and the last is the

main *stupa*. The pilgrim winds around this initiatory spiral, the labyrinth of the spirit. He ascends steps by steps towards the summit, keeping the centre on his right in accordance with a thousand-year-old tradition, and following the course of the sun. Thus his voyage extends to all known universe, and he emerges into the eternal and becomes one with the universe, finally realizing his own sense, his own rotation around his centre. He identifies himself with the universe, becomes the cosmos; his spirit, freed of all constraints, becomes the infinitive and all its manifestations. The pilgrim then attains the state of *bodhi*, “perfect wisdom”, as the Sakyamuni Buddha did 2,500 years ago. Having realized his own *buddha* nature, he is the Buddha²¹.

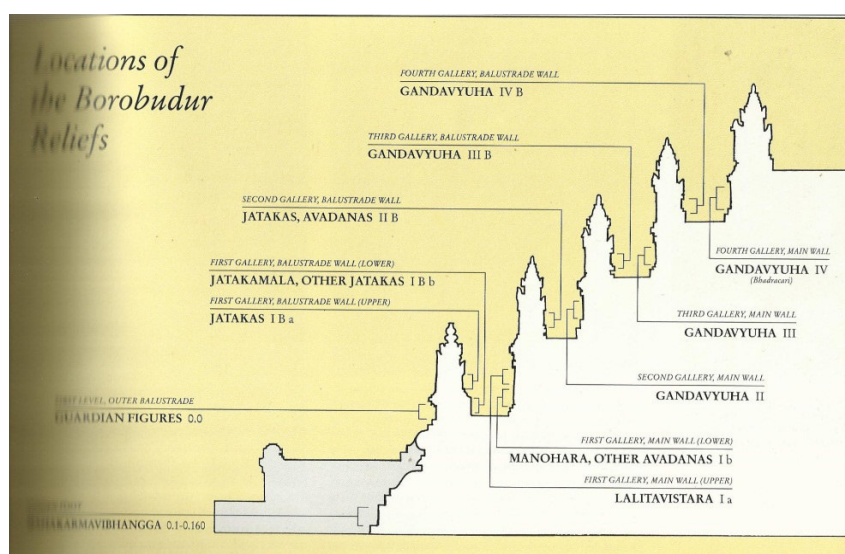
Nou and Louis further state that Borobudur is neither a temple, a place of worship, nor a sanctuary. One does not go there to pray but to bask in a spiritual universe. It is magical place, a gigantic antenna that gathers forces and thoughts, condensing them into a lesson that pilgrims learn only by degrees. One can also imagine Borobudur as a great instrument, with the stories corresponding to successive notes, each one purer and more silent than the last; one climbs levels by level on marvellous voyage of ascension toward ultimate truth²². It is a spiritual monument known as “*candi*” or temple di Javanese term despite the fact that *candi* is commonly used for worshiping god. In the case of Borobudur we will find neither room nor wall for worship. As early as 1925 Omura Seigai had opined that the Borobudur is a *mandala*²³. He clearly stated that it is not a *vihara*, neither is it a *caitya*. It is not a *stupa* either. It is a three-dimensional *karma mandala*, one of the four kinds of *mandalas* of Esoteric Buddhism²⁴. It is a Buddhist monument for spiritual ascendance.

4. The Reliefs

As a manifestation of philosophy of Mahayana Buddhism, Borobudur contains symbols from bottom to top. It is a representation of universe in nature for which human being starts spiritual journey. Nou and Frederic mention that the monument as a whole constitutes an initiatory *mandala* that sums up the essential beliefs of that period. The narrative reliefs that ornament the walls and balustrades on Borobudur’s galleries – 1.460 in all of which 160 are on the “hidden base” – have intrigued scholars since their discovery in 1814. They are combined length of more than one and one half miles (2.500 m.), an outstanding gallery of narrative that is unique in all the world²⁵. Of being a huge spiritual monument, a pilgrim requires times and passion to understand it as how to start the spiritual journey; one can be lost in the maze of reliefs. Of various symbols, some of them are closely related with ecology. And, since it is art in nature, it is another form of cultural ecology. As such, the monument is indeed rich of symbols depicting various aspects of nature, flora, fauna, human beings, gods, goddess, *kinara*, etc. For a Buddhist pilgrim, it is looked from a spiritual dimension for self-transformation. As remarked by Miksic, Borobudur provides a place where Buddhist could physically and spiritually pass through the ten stages of development that would transform them into enlightened *bodhisattvas*. This

transformation was the monument's main purpose, and both the overall design as well as the stories portrayed on Borobudur's relief is connected with this theme²⁶.

The first three levels is *Kamadhatu* level, four levels onwards is the level of *Kama-dhatu*, and the last three levels is the level of *Arupa-dhatu*. The three levels of the world are in correspondence with three states of mind, as usually found in Buddhist cosmology. There is an ascending process from the lower to higher state of mind, or from outer part to inner one of existence. Being in a hill, Borobudur has a purposeful air, full sun rays on the days and full moon light at night. Decorated with maze stairs ways, galleries, terraces, and sculpture Borobudur stands for its deep philosophical thoughts and stands as a huge spiritual monument in an amazing way.



Locations of the Borobudur Reliefs (Source: Miksic, 1994, p. 43)

As a symbol of universe, the building – as mentioned above – consists of three big parts, viz. *Kamadhatu* (the lowest level), *Rupadhatu* (the middle level), and *Arupadhatu* (the top level). In *Kamadhatu* it equals to low world or the world of desires. Human beings are governed by various desires. This main topic is depicted through reliefs depicting *Karmawibangga* to which this paper concentrates. It is about the Causal Law, an important tenet of Buddhist even in all Indian philosophical traditions. In *Rupadhatu* it is the world between or the world of form. In this world human being has left all kinds of life affairs and detached with desires. This part locates on the first to the fourth gallery. In *Arupadhatu* it is the world without form or upper world. It is the abode of gods. This part locates on round terrace of the first, second, and third level along with the main *stupa*.

Reliefs depicted on the walls; they are series of stories, which are depicted in one panel for one scene. There are 1,460 crafted panels in various parts of *Kamadhatu* and *Rupadhatu*; 160 crafted panels in *Kamadhatu* which was covered in the foot of the temple. In *Rupadhatu*, the reliefs appear on the walls of the temple and on balustrade in each gallery. There are four galleries which con-

sist of 1.300 relief panels. On the walls of the body of the temple of the first level, the upper relief is story of *Lalitavistara* which consists of 120 panels. The condition is relatively still good and readable. The stories of *Jataka* and *Avadana* only some parts of them can be known the story. A lot of them in a very poor condition, broken even lost so that they are very difficult to be understood its message. In the gallery of the upper levels are about reliefs of *Gandavyuha* of *Samanthabhadra*. The last level of *Rupadhatu* is the relief of Maitreya. Buddha Maitreya can be known due to the existence of symbol of small *stupa* on his crown. Above the balustrades, available 432 statues²⁷ of Buddha stands with different *mudra*, hand posture.

With reference to religious belief of this temple, Lokesh Candra states that beyond the three circular terraces is the final *stupa*, bigger than all other. It is crowning of the *Vajradhatu-mandala*. It forms the crown of the whole monument. It is placed on a double lotus. It is firmly closed. Inside is open space which is empty. It is the *sunya* (void), the Absolute, the mountain of Silence, the highest expression of Truth in the quest of the pilgrim. While the *sadhaka* (spiritual aspirant) ascends the Borobudur on to higher terraces he proceeds to higher domains of spiritual life. In a similar way, the *Tathagatha*²⁸ gradually manifests Himself downwards in order to be approached to beings. It is the descent of the Divine to this earth²⁹.

5. Some Elements of Cultural Ecology: A View on the *Mahakarmavibanga* Reliefs

The relief of *Mahakarmavibanga* is inspired from the text of the same name. It depicts when Gautama is seating in Anathapindika garden, and teaching the Law before an assembly of monks (*bhiksu*). Suka Manawa was one of them. He asked question about the laws. Gautama preached to Suka Manava the *Mahakarmavibanga* (Great classification of actions), one of the most important elements of the Buddhist Law, or *Dharma*. There are eighty headings, some fifty of which are addressed on the hidden base of the temple. Thus, the *Mahakarmavibanga* is basically about the teaching of Cause and Effect Law. Speaking on its moral message, Gupta states that undoubtedly, these reliefs leave an effect on the minds of onlookers, the acquaintance with good and evil deeds and reminders of the desirability of escaping from the sorrows of existence by achieving *Nirvana*³⁰.

The reading of the relief is started from the right part of each relief and then proceeds to the left side. The pictures on the right part are usually about an action / condition presumed to be the cause, whereas of the left side, which can be one or two segments, are the effect. Thus, it is cause and effect chain. When the artists shows the Law of Cause and Effect, the drawing was done like that in consistent way, so that it is easier for a viewer to understand the message. Sometimes a panel is difficult to understand its meaning as seems that there is no connection with the whole stories figured out in a long balustrade. Some basic knowledge of Buddhism or text is required for faster to grasp its message.

In addition to telling the teachings and stories of the Buddha, the reliefs are also pictures of past times. The pictures of dancing people, musical instruments, hunting, ship, houses, dialogues, etc. are typical characters of the reliefs. From these reliefs, it can also be known agricultural products, the manner of dressing, situation of market, and religious functions, etc. In short, it is about life in its complexities of cause and effect chain. Interestingly that the architecture, as to compared to Sanchi *stupa*, manner, scenario and nuance produced by the artists were typically Javanese, despite of the fact that Buddhism was originated from India.



1. Fishermen who trap fish, those who transport and sell fish . . .



2. . . . a hunter, and those who eat fish may return as stillborn children.



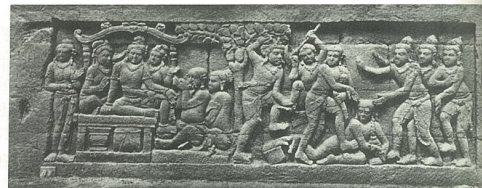
Four warriors quarrel. They are reincarnated as sickly children.



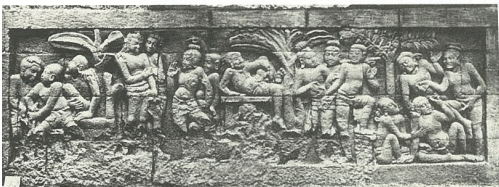
6. A holy man preaching; a united couple.



9. Animals being tended; a man releases fish into a pond.



10. Some men are attacked, and others come to their rescue. These will enjoy a happy old age.



3. A man in a weak state is mocked (damaged relief).



14. A man begs for mercy from another, who is armed. Daily life.



17. A gathering of *brāhmins* whose relations are harmonious.



18. Care given to the sick, who are primarily women.



21. Speaking ill of others causes ugliness (*virūpa*).



22. Speaking ill of others causes an idle life (cat on lower right).

Some pictures of reliefs of Mahakarmavibangga [(Nou & L. Frederic, Borobudur, 1994), p. 218]

Observation conducted on the relief of *Mahakarmavibanga*³¹, it shows various ecological elements that are crafted by the Javanese artists, as shown in the table below. They persistently worked and expressed their artistic talents based on texts of Buddhist teachings.

Plants	Animal	Natural elements	Building	Instruments/ tools	Stationary	Human being
tree/ forest	Fish	cave	House	fishing instrument	book	men
Banana tree	Elephant	fire	Shelter	dish tools	ink	women
Plant	Monkey	water	Pavilion	musical instrument		baby
Grain	Dog	sea	Palace	ship		sick person
Grass	Deer	pond	hermitage	kitchen instrument		king
Flower	Cow	air	Bed	medical instrument		servant
Lotus	Ox	mountain	Cemetery	hunting instrument		hermit
Fruit	Cat	sky	Hell	knife		sage
	Rat	ash	Kitchen	weapon		merchant
	Rabbit	medicine	Monastery	vessel		hunter
	Hen	food	Sanctuary	vehicle		
	Bird	drink	market	parasol		
	Snake	ash	cave	umbrella		
			heaven	fan		

Of the huge reliefs, forest, tree or plant are the dominant elements which appear in almost all reliefs. There are various plants which depict the flora and fauna heritages of this island, like mango, banana, bodhi, bamboo, etc. Human being is depicted in various kinds, like prince, sage, hermitage, hunter, dancer, common men, men, women, baby, king, etc. In addition to these trees, the artists also crafted various shelters or houses including pavilion, bed, and hut. It is often shown food or drink utensils. Interestingly, the artists were able to depict the interactions amongst those elements in an artistic way. It is very often dialog was taken within shelter or in open space. The artists were also very gifted in crafting various kinds of animals found in this island, like elephant, horse, cow, donkey, dog, rabbit, snake, various birds, cock, hen, insects, etc. The trees seems to be those were available in Java at that times, like mango, coconut, bodhi, banana, bamboo, various grass, etc.

The ecological aspects depicted in the reliefs of its walls are no doubt connected philosophically with the other parts of the monument; creating a whole unit of tenets of Buddhism. One cannot jump up from the *Kamadhatu* to *Arupadhatu* without undergoing spiritual progress. The meaning of *Kamadhatu* cannot be understood well unless one understands the reliefs of *Mahakarmavibanga* on its walls, and good understanding of it motivates one to proceed further. After all the grey stone monument of Borobudur is an open book of religion and philosophy, stone of deep thought, aesthetic, and prayer inspired by the teachings of the Buddha. Everyone can read it, the spiritual heritage of mankind.

6. Interconnectedness: Cultural Ecological Message

The complex life depicted in various reliefs in the Borobudur temple can be viewed from Buddhist's view on the relationship of human and nature in which mind plays an important role. Right thoughts (*samma-sankappa*) are the starting point to deal with environment. Environmental problems arise due to wrong thoughts. The relation amongst elements is very complex and multi-dimensions.

What is obvious is that none exists without any interdependence with the other in impermanent way. In other words, none remains in isolation from other existence. The function or meaning of an existence can be gained when it exists in connection with the other, like planting paddy in a rice field: it depends on so many elements, like climate, water, soil, fertilizer, farmers, sun rays, etc. for a good harvest. The existence of an entity gives rise to the existence of other existence in infinite regress. The relation is mutual in which each serves the other. This view is the base on which spiritual cultural ecology may be defined in Buddhist perspective. Maintaining interconnectedness means one acknowledges and respects the existence of other elements, not only human beings, but the entire existence in the world. The reliefs of *Mahakarmavibanga* show the Law of Cause and Effect in operation and it is successfully presented through various scenes in the reliefs.

Buddhism sees everything in this universe is interrelated in multifarious way; seeing things not as beings but as patterns of relatedness. The pattern presupposes the existence of elements or entity along with its form and nature. This can be clearly seen in the theory of dependent-origination (*Pratityasamutpada*) as causation. When, at the beginning, this law was only understood in the frame of life and death, cultural ecology can be viewed from this law also, because *Pratityasamutpada* is basically the law of cause and effect in which elements play an important role the course of time. This fact is variously depicted in the reliefs, e.g. relief 2: those who eat fish may return as stillborn children, relief 5: four warriors quarrel. They are incarnated as sickly children, relief 10: some men are attacked, and others come to their rescue. These will enjoy a happy old age, relief 21: speaking ill of others causes ugliness (*virupa*), etc. As said by Th. Stcherbatsky that although the separate elements (*dharmas*) are not connected with one another, either by a pervading stuff in space or by duration in time, there is, nevertheless, a connection between them: their manifestations in time, as well as in space, are subject to definite laws, the laws of causation³². In one of Buddhist sources it is said that, "the tree indeed is the bearer of the flower and the fruit... the tree gives the shade to all people who come near... the tree does not give shade differently (*Milindapanha*, VI, 409)³³. Thus, none can escape from this eternal law. The word *dharma* here means that elements operating together with another³⁴ as shown in the reliefs of the walls.

The use of environmental resources should not destroy it for which environmental ethics is badly required; an ethics inspired by the teachings of *silā*, *samadhi*, and *panna*. It is about management between exploitation and conservation of nature. It is no doubt very important as environmental ethics stands in between human desire and natural resources; human desires are never satisfied. In one way, this ethics connect human to nature, on the other hand, it filters wrong doing to nature. This is guiding principles to govern the management system applied, which covers right action (*samma-kammanta*), right live hood (*sama-ajiva*), and right effort (*samma-vayama*), otherwise management applied is to satisfy greed only not need.

Buddhism uses the term "*Dhamma*" or "*Dhammata*" for the Order of Nature or Law of Nature. As per basic precepts of Buddhism, everything in natural world is subjected to change (*anicca*). If men are aware of this fact, natural environment will be well preserved. He may take benefit from nature; they are not depleted but sustain for balance ecosystem. E.F. Schumacher in one of his works quoted by M.K. Gandhi says that earth provides enough to satisfy everyman's needs, but for everyman's greed³⁵. This attitude is none but part of *samma-jiva* (right live hood).

Buddhism looks at cultural ecology not merely from physical phenomenon but also from spiritual one. Thus, it is not sufficient to define it with reference only to natural and its relation to man only, but the interrelatedness of them should be viewed as a medium or path through which one can be spiritually lifted up to higher sphere of life.

7. Conclusion

Borobudur Buddhist temple of Java reflects Buddhist cosmology of Mahayana school and the cultural ecology, i.e. adaptive interrelationship of existences, viz. human and human, human and nature, and nature with nature creating a spiritual culture of ecology. The reliefs of it either in the main walls or balustrade are very rich containing elements of cultural ecology, viz. human beings, plants, animals of different kinds, and elemental aspects (*bhuta*), like water, pond, fire, cloud, wind, etc. and their interactions. Amongst these elements, tree, plant or forest are the most prominent aspects crafted by the artists in addition to shelter or house. They interact in multiflorous way; each performing its role or function. With reference to *Mahakarmavibangga* reliefs of the *Kamadhatu* the relation is based on the concept dependent-origination (*Pratityasamutpada*) as Causal Law in which there is relatedness amongst the elements in complex way. This topic is supposed the first lesson that should be understood by a pilgrim before starting his spiritual journey.

Borobudur temple as unit of sacred monument considered as representation of mountain is no doubt a good model of spiritual cultural ecology *par excellence*, as none of its elements is free from the message of the Buddha and Buddhism on the view of interaction between human and environment. It is philosophy and art in nature showing the elements of nature or environment. Not only showing the relation of men and nature, but through this monument one can develop his/her spiritual capacity; Borobudur as a whole unit of sacred building has a deep spiritual message even at the first sight a pilgrim witnesses it. The different topic of different levels starting from the base level (*Kamadhatu*) onwards contains metaphysical, ethical, aesthetical, and environmental messages that a pilgrim needs to know in his spiritual ascendance till reaching the final top most *stupa* representing *sunya* (complete void), the very central message of the Buddha. When one understands the existence of such elements and interaction with the others in the world, one is obliged to take it into account. One is taught that human being should maintain harmony and peace with nature before thinking peace for human fellows for imbalance between human and nature can cause environmental problems, which ultimately affect the whole system of the universe. One should respect and maintain the relatedness amongst these elements. In such condition, one needs environmental ethics as how to treat environment in the spirit of the Buddha teachings for better world order and happy life.

Notes and References

¹ S.K. Gupta, "Borobudur: Climax of Buddhist Art" in *History of Science, Philosophy and Culture in Indian Civilization*, Vol. I Part 3, D.P. Chattopadhyaya (gen. ed.): *India's Interaction with Southeast Asia* (G.C. Pande (ed.) (Delhi: Centre for Studies in Civilization, 2006), pp. 371-445.

² As sub title of book. See, Soekmono, *et.al. Borobudur: Prayer in Stone* (Paris: Editions Didier Millet, 1990).

³ Some scholars have produced their works on Borobudur, like Adams (1990), Badil and Nurhadi (1989), Kempers (1960), Bosch (1959), Daigoro (1980), Jacques (1978), Froman (1980), Gomez (1981), Gupta (2006), Ryusho (1960, 1965), Krom (1926), Levi (1931), Lokesh Candra (1995), Miksic (1990), Moens (1951), Mus (1934), Namikawa, *et.al* (1971), Sarkar (1995), Soekmono (1969, 1971, 1980), etc.

⁴ See, *Environment and Buddhism* (Delhi: Prashant Publishing House, 2011), p.1.

⁵ *Ibid.*, p. v.

⁶ See "Buddhist Perspective on Ecological Crisis and Individual Social Responsibility", <http://newlotus.buddhistdoor.com/en/news/d/31783>, retrieved on 10/09/2014.

⁷ *Ibid.*, pp. 42, 43.

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- ⁸ See, Lokesh Candra, “Borobudur is the Base of an Architectonic Vajradhatu-Mandala” in *Cultural Horizons of India*, Vol. IV (Delhi: International Academy of Indian Culture and Aditya Prakashan, 1995), p. 39.
- ⁹ *Ibid.*, p. 42.
- ¹⁰ *Ibid.*, p. 48.
- ¹¹ *Ibid.*, p. 45.
- ¹² *Ibid.*, p. 55.
- ¹³ Before the renovation this part was still seen. Fortunately photographs of it were taken by a researcher to who we have to thank due to his noble effort to preserve the reliefs of *Mahakarmavibangga* in the base level.
- ¹⁴ Jean-Louis Nou and L. Frederic, *op.cit.*, p. 55.
- ¹⁵ *Ibid.*
- ¹⁶ *Ibid.*, p. 58.
- ¹⁷ *Ibid.*, p. 60.
- ¹⁸ *Ibid.*, p. 62.
- ¹⁹ *Ibid.*
- ²⁰ *Ibid.*, p. 64.
- ²¹ *Ibid.*, p. 16.
- ²² *Ibid.*
- ²³ A scheme or representation of the cosmos or a given cosmic sphere. *Mandala*, whether visualised, painted, drawn or built in stone, focus energy for meditation or devotion. A *mandala* with a physical existence is called a *yantra* (See, Soekmono, *et.al. op.cit.*, p. 171).
- ²⁴ See, Lokesh Candra, *op.cit.*, p. 40.
- ²⁵ Jean-Louis Nou and L. Frederic, *op.cit.*, p. 215.
- ²⁶ See *Borobudur: Golden Tales of the Buddhas* (Singapore: Periplus, 1994), p. 39.
- ²⁷ However, J. Dumarcay mentions 368 Buddha statues [See, *Borobudur* (Kuala Lumpur: Oxford University Press, 1983), p. 34.
- ²⁸ “He who came”, a term of respect often used to describe Sakyamuni Buddha, or another Buddha [See, Jean-Louis Nou and L. Frederic, *op.cit.*, p. 333]
- ²⁹ See, Lokesh Candra, *op. cit.*, pp. 39-40.
- ³⁰ S.K. Gupta, *op.cit.*, p. 385.
- ³¹ Based on pictures in Louis and Frederic’s books *Borobudur* (New York: Abbeville Press, 1994).
- ³² See, Th. Stcherbatsky, *The Central Conception of Buddhism* (Motilal Banarsidass, 1994), p. 28.
- ³³ See “*Buddhist Perspective on Ecological Crisis and Individual Social Responsibility*”, *op. cit.*
- ³⁴ See, Th. Stcherbatsky, *op.cit.*, p. 28.
- ³⁵ See “*Buddhist Perspective on Ecological Crisis and Individual Social Responsibility*”, *op.cit.*, p. 6