# The Middle-way of Buddhism and Environmental Problems

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## Introduction

THE 4th Intergovernmental Panel on Climate Change (IPCC)[1] report was disclosed in the spring of 2007. The Japanese Ministry of Environment has also announced an officially translated version in Japanese. In this paper, we first summarize the 4th report from the IPCC, and second describe past environmental conditions and/or climatic change of our planet Earth. In other words, what phenomena and events have happened on the planet Earth until now? Third, we disseminate information suggesting that the present time may be a major turning point for dramatic environmental changes. Although we can only speculate and hypothesize at this stage, it is realistic to conceive that considerable and severe environmental transformations may arise unless current conditions are addressed. Finally, we would like to describe how Buddhism would approach environmental problems from the perspective of the Buddhist principle of the "middle way," particularly from the stand point of "the wisdom of the doctrine of origination in dependence" and "the wisdom of the middle way."

## Current condition of global warming: From the 4th IPCC report on increasing greenhouse gases

The concentration of carbon dioxide ($CO_2$) in the atmosphere has without question increased sharply in recent years when compared to the atmospheric conditions of the recent past (last ~250 years). Whenever current $CO_2$ concentrations are evaluated, scientists tend to use the $CO_2$ concentrations from the year 1750 as the boundary line between the pre- and post-Industrial Revolution. The $CO_2$ concentration before the Industrial Revolution was 280 ppm. The unit ppm (parts per million) equates to 1/1 million of atmospheric volume. Therefore, although the carbon

dioxide concentration appears to be relatively low in the atmosphere, its concentration significantly influences the insulation and surface temperature of Earth. Carbon dioxide concentration in the atmosphere has increased to 381 ppm from 280 ppm in 1750, an increment of ~100 ppm during the course of 250 years. Although the average rate of increase is ~0.4 ppm per year, the most recent rate of increase has exploded to about 2 ppm in one year. The fast rate of increase in $CO_2$ has not been observed before in the past. Carbon dioxide is a typical greenhouse gas. Other greenhouse gases include methane, nitrous oxide, sulfate, etc. in addition to carbon dioxide. Although the concentration of other gases in the atmosphere is relatively low in comparison to carbon dioxide, all gases including carbon dioxide are rapidly increasing in recent years.

How large is the greenhouse effect by carbon dioxide? As a matter of fact, the greenhouse effect is relatively large. If Earth is warmed only by direct solar energy in conditions without an atmosphere, the surface temperature of Earth would be only -19°C. However, in actuality the average temperature of planet Earth is about 14°C. Therefore, the difference is about 33°C. The 33°C difference is what we refer to as the greenhouse effect by the atmosphere of the earth. Although carbon dioxide, methane and other gas concentrations in the atmosphere are a mere 380 ppm, the effect is relatively large. Thus, it is natural to feel uneasy about the idea that the greenhouse effect will increase due to small increases in carbon dioxide or methane gases.

## Annual input/output of carbon dioxide

Carbon dioxide contains the chemical element carbon. Let us next examine the fate of the carbon on Earth currently emitted by anthropogenic (human) activities. This perspective is important particularly when we examine the extent to which human activity has influenced climate on Earth. Carbon is most abundant in sea water. Carbon in sea water accounts for 38,000 Gt (Giga ton = $10^9$ tons) and is mainly comprised of dissolved carbonic acid, dissolved and particulate organic carbon and plankton. In addition to this oceanic volume, there is about 730 Gt of carbon dioxide in the atmosphere, 500 Gt organic carbon in the form of land plants and 1500 Gt of organic carbon in soil. These are the major stocks of carbon influencing the Earth's surface, or biosphere.

Carbon is utilized by various living organisms on Earth and is continuously being recycled. There are two major carbon cycles on Earth: one is a fast cycle and the other a slow cycle. The fast cycle consists of those

processes occurring on land and in the sea. The land cycle includes processes associated with photosynthesis by terrestrial plants that utilize atmospheric carbon dioxide, the processes associated with animals feeding on plants, and the processes by microbes that decompose decaying living matter and return carbon dioxide to the atmosphere. Similarly, the same cycle occurs in the sea, which includes photosynthesis processes by phytoplankton using carbonic acid dissolved in sea water, the feeding processes of phytoplankton by zooplankton, and the decomposing process by microbes. As a result, carbon quickly returns to the atmosphere from the sea. Carbon cycles have been estimated to be ~90 Gt /year on land and ~120 Gt/year in the sea.

On the other hand, there is some carbon which leaks from the fast cycle and circulates through a slower cycle. The first process mainly occurs in the ocean where carbon escapes the decomposition processes by microbes and is transferred to marine sediments. The second process occurs when the sediments settle into the mantle from the crust by plate tectonic activity or become sedimentary rock through geological time. Carbon that finds its way into the mantle returns to the atmosphere as carbon dioxide by volcanic and other crustal related activity. The cycle is a particularly slow process which takes about 100 to 200 million years. Oil and natural gas belong to this slow cycle. On land, such cycles are associated with the generation of coal.

While there are both fast and slow carbon cycles on Earth as mentioned above, what effect does human culture and society have? Human culture is burning fossil fuel and discharging carbon dioxide into the atmosphere at an alarming rate. The question is what impact does this discharge have on the naturally occurring carbon cycle? The answer to this question begins with the fact that carbon originally designated for the slow cycle such as fossil fuels is suddenly circulated into the fast cycle. The extra amount of carbon dioxide released into the atmosphere is ~7.1 Gt/year exhausted from the combustion of fossil fuels, in addition to the discharges associated with changes of land use such as deforestation. Currently, the amount of carbon in the atmosphere is ~730 Gt where the ratio of human induced carbon is approximately 1/100. However, not all human generated carbon is released and accumulated in the atmosphere. At least 1.9 Gt dissolves into the ocean and another 1.9 Gt is utilized for photosynthesis by land plants. Therefore, roughly 3.8 Gt of the total 7.1 Gt of anthropogenic carbon is processed by the ocean and land. However, an extra 3.3 Gt of carbon is being emitted into to atmosphere annually by human activity. This is the source of the current dilemma relating to the global warming phenomena induced by carbon

dioxide.

## Influence of warming

Recently, the average surface temperature of the world has risen likely due to increases of anthropogenic greenhouse gases such as carbon dioxide. For example, the average surface temperature of the world from the past 12 years (1995–2006 year) are the warmest 12 year period ever recorded since 1850 when recorded observations began. Moreover, the average surface temperature of Earth has increased by 1°C in the past 150 years. The increase in temperature not only affects the atmosphere and ground temperatures but also causes ice in Antarctica and Greenland to melt. If ice on these continents melts, the volume of sea water increases and sea levels rise. The rise in sea level is caused not only by melting ice but also by the thermal expansion of water. In the past 130 year, we have observed a 20 cm rise in sea levels. While the increasing incremental rate was 1.8 mm/year from 1961 to 2003, it has risen to 3.1 mm/year from 1993 to 2003 in response to the rise of overall surface temperatures.

The impact of warming temperatures is larger as latitudes increase towards the poles. When the average temperature rises 1°C, the impact is several times higher in the higher latitude regions. Thus, temperature changes have a larger impact on regions such as the South Pole, Greenland and the North Pole. Incidentally, the area of annual summer Arctic sea ice thaw was the largest ever recorded during the summer of 2007. Further, it is apparent that glaciers in the Everest and Alps regions are also retreating. The glacial retreat is not only caused by the melting of ice, but also by decreases in rainfall (or snow) precipitation itself. All are considered to be influences of global warming.

## Change of the paleo-climate

Next, we would like to describe changes in the paleo-climate of the earth from the viewpoint of longer time-scales. It turns out that past environmental changes on Earth were bigger than imaginable. In order to ascertain current and future changes to Earth's climate it is critical to accurately account for broad historical conditions. For example, when temperatures rise or fall, what kind of planetary changes actually occur? The means and methods to answer this question require robust understanding of the past. In other words, it is critical to understand the past in order to predict the future.

When we review fluctuations in surface temperature from the past 2000 years, we find that temperatures from 1500 to 1700 A.D. as a cold period in time commonly referred to as "the small glacial epoch of the medieval time" which corresponds to the Edo period in Japan. On the contrary, the period from 900 to 1100 A.D. is considered a relatively warmer period often referred to as "the warm period of the medieval time," which corresponds to the Heian period of Japan. The dramatic differences in climate conditions during these two periods are known to have been acutely influential to human culture. For example, agricultural production was limited due to low surface temperatures during the small glacial epoch of the medieval period. During this cold, drier period it was common for peasants to rise against the government and act repulsively towards all aspects of society. On the other hand, during the relatively warm period of the medieval time during the Heian period in Japan, artistic creativity and prosperity was abundant.

When surface temperature changes are assessed on time-scales of ten thousand years, we observe even larger instability in temperatures that had tremendous impact on Earth's environments. For example, the Jomon era over 6000 years ago was known to have been relatively warmer than the present day. During this warm period ice on land melted and sea levels were higher. As a result, sea water invaded deeper parts of the coastline, and the period is referred to as "the time of marine transgression." In Japan, the sea reached inland to neighborhoods of Saitama and Gunma Prefecture of the Kanto region. The period from 10,000 to 20,000 years ago is considered the glacial epoch. Relative to present conditions the average surface temperature was 7–8°C lower where glaciers carved large portions of land. Therefore, sea surface levels were lower, and the period is often referred to as "the time of marine regression." Contrary to "the time of marine transgression," sea surface levels fell by >10 m, and it is well known that the land-area of the Kanto region was expansive.

The relatively warm period of the modern day is considered to be an intermittent period referred to as the interglacial epoch. The oscillations between glacial and interglacial epochs have alternated for the past one million years with cycles of 100,000 to 130,000 years. The main cause of the alternating cycle is explained by the relation between the Sun and Earth, *i.e.* eccentricity, inclination of the earth's axis, and precession movement. This cycle is called the Milankovich cycle, the name of the discoverer. However, since there is no evidence of these cycles prior to one million years ago, many questions remain vaguely unanswered.

If paleo-climate is assessed on even longer time-scales of 100 mil-

lions of years, we find even more dramatic changes have occurred on the planet. Obviously, there are some perceivable uncertainties due to the difficulty in accurately determining the temperature and climate of the remote past. The Cretaceous period during the time of the dinosaurs ~100 million years ago, the Devonian period when the first fish evolved ~400 million years ago, and the Cambrian period when the first animals evolved ~500 to 600 million years ago were all periods that were relatively warmer than the present with almost no glaciers on land. Moreover, it has been hypothesized that the planet Earth was like a giant snowball (the entire planet is frozen) ~600 to 800 million years ago and also during the period of 2,200 to 2,400 million years ago.

In short, the present day which has glacial ice on land to some extent is hypothesized to being an intermittent period between extensive freezing (snowball features) and warmer (absence of ice) periods. We can also conclude with some certainty that there is a fundamental relationship between the concentrations of greenhouse gases such as carbon dioxide in the atmosphere and surface temperature fluctuations. In other words, regardless of the controversial impact increases in anthropogenic carbon may have on the climate, modulations of carbon dioxide concentrations in the atmosphere correlate with temperature fluctuations.

## Future prediction

According to the IPCC report, six potential scenarios are currently predicted for the future. The six scenarios predict surface temperatures for the year 2100 based on six potential directions human activities could lead. The best scenario predicts that clean and resources saving technologies are introduced in accordance with a decrease in the human population after a peak in the middle of the 21st century. In this scenario, economical gaps between regions and reliance on natural resources decrease. The prediction in this scenario is that surface temperatures will rise 1.1–2.9°C (probably 1.8°C). On the other hand, the worst-case scenario is the predication that high economic growth continues with a continued reliance on fossil fuels in spite of introductions of new efficient technologies and similar human population decrease as above. The prediction in this scenario is that surface temperatures will rise 2.4–6.8°C (probably 4.0°C).

If we assume the worst-case scenario with an average surface temperature increase of ~4°C, the higher latitudes in the Northern Hemisphere will likely see relative surface temperature increases of up to ~10°C. Current conditions suggest the worst-case scenario is the most likely

path with unimaginable alterations to the climate and physical features of the entire plant. When we consider the influence of warming of this magnitude in every region of the world, what will the planet Earth look like? The influence of the warming will certainly change the planet Earth beyond imagination.

## Have we reached a critical turning point?

As mentioned above, there was a cold period in time when the planet was like a giant snowball and a period of relative warmth without extensive ice. Climatologist Mikhail I. Budyko of Russia solved an equation which explains the state of stabilization between the balance of solar energy which the earth surface receives and the energy of infrared emission which escapes the Earth's surface[2]. According to this equation, there are two stable solutions to the balance where the warm solution constitutes no ice on Earth and the cold solution constitutes a snowball-like Earth. The two solutions are very stable due to the feedback mechanism that works even when there is a shift to warmer or cooler conditions from no ice Earth or from the snowball Earth. Interestingly, the present day condition is located in the middle of the two solutions and is in an inherent unstable condition with incoming and outgoing energy sensitively balanced. In other words, the present state is unstable and can tip towards two potential outcomes of either a warm or cold solution. The Budyko equation suggests that once Earth leans towards either stable condition, it cannot easily escape from that climate state. However, Earth has alternated between the two solutions of a warm and cold period before suggesting that some mechanism exists to shift from one spectrum solution to the other. The cause and mechanisms are hardly understood. However, we must consider the possibility that our planet may shift from the unstable solution to either stable solutions. From this perspective, recent human activities may have pulled the trigger so to speak toward the warm solution.

## The Buddhist perspective: wisdom of the middle-way and the dependent origination

Next, we would like to discuss how Buddhist philosophy relates to and could potentially contribute to solving environmental problems[3]. First, let us clarify the concept of how Buddhist philosophy should contribute to solving environmental problems. In Buddhism, the concept of "living things" includes not only people, but all life forms on the planet. From a

Buddhist perspective, environmental problems such as degradation and pollution are not just human-related issues, but a serious complication for all living organisms. Naturally, environmental problems will cause physical and mental suffering for all living organisms. One of the fundamental principles of Buddhism is to reduce and remove the suffering for all living entities. From this precept, it is natural for Buddhist philosophy to actively function for the sake of resolving ongoing environmental problems.

Buddhism has two philosophical concepts: the "dependent origination or arising from causation (*engi*)" and the "middle-way (*chudo*)." Both concepts, serve important viewpoints that contribute to solving environmental problems. The concept of "dependent origination" teaches that every entity generates and exists in relation to one another. In other words, nothing in life is conceived independently rather all phenomena are conceived in relation to everything else (conception and existence are one). The causal connection between all things encompasses spatial and time relations.

Spatial relations are ecological relationships between living organisms (biotic relations), or relationships between living organisms and their environment (abiotic) including inorganic material on Earth. In the case of human beings, the relationship not only includes fellowman, but also includes all other living organisms including plants, animals, microbes, and environmental factors such as the physical environment, the atmosphere, temperature, etc. The time relation not only includes the connection between one generation to the next (parents and children), but also encompasses historical time-scale relationships such as the process of evolution. In the case of the human species, naturally, we have journeyed from a long evolutionary process in accordance with the long history of the planet. Humans did not evolve from humans; rather we evolved from various living organisms. This is the meaning of the time relation in the Buddhist concept of "dependent origination or arising from causation (*engi*)."

As mentioned above the doctrine of "dependent origination" denotes spatial and time relations. Diversions that harm these dependent origination relationships are contradictory to Buddhist wisdom. The concept is suitably expressed in the simile of Indra's Net describing the aspect of "dependent origination" in the Huayan or Flower Garland Sutra (*kegon-kyo*) in Buddhist literature. The simile describes a great net that hangs in the palace of Indra, the God of Thunder. The countless joints or knots adorned with jewels are in a beautifully complex mesh. Each of these jewels clearly reflects all the other jewels in the net, so that every part of

the net reflects all other parts. The jewels or knots and the net express each living entity and the ecosystem, respectively. The net is stabilized so that the relation is complex. The reason each link or knot is expressed as a jewel implies that each living entity has value beyond imagination and by projecting the reflection of other jewels signifies the mutual respect and deep relationship each living thing has towards one another. Each jewel glitters differently expressing that each living entity lives with its own unique independence. Therefore, even if there is a human being in the relationship (ecosystem), the human being is not the only jewel expressed in the net. Moreover, this net (ecosystem) is stable only after all of the various living entities are in a balanced relation. Naturally, the entire net is only as strong as the small intricate lines that connect all other mesh lines. If any part of the net is cut or jewels removed, the stability of the entire net is at risk of collapsing. This parable correctly describes the sensitivity of the natural ecosystem on Earth and the susceptibility to environmental degradation. Thus, maintaining a balanced ecosystem with biodiversity is very important from the viewpoint of concept of "dependent origination" in Buddhism.

The second Buddhist concept is the wisdom of the "middle-way (*chudo*)." Although the concept has various interpretations, here we discuss the concept of the middle-way from the true definition which explains the important incorporation of both pleasure and pain. In other words, the true meaning of "*chudo*" is not the "middle" in the context of economic or political matters; rather the true meaning of the middle-way includes the relationship of both extremes. The middle-way of pleasure-and-pain is founded from the practice methods of Shakyamuni. Although Shakyamuni carried out austerities (one extreme) for six years together with five monks, he was unable to attain spiritual enlightenment. After this long attempt, he realized the futility of trying to attain enlightenment through punishing himself. Indeed, after he received rice gruel with milk from a woman named Sujata he recovered from his physical ordeals, and did in fact attain enlightenment. The "pain" of the penance principle indicates that although perhaps useful for developing strength of mind it does not lead to attaining absolute wisdom, or spiritual enlightenment. Instead, the "pleasure" of hedonism shows that absolute wisdom or enlightenment can be acquired without taking recourse to punishing oneself. Therefore, the concept of the "middle-way of pleasure-and-pain" refuses a deterministic stand towards either hedonism or austerity. That is, while accepting the value of either principles or extremes the "middle-way" demands harmony between the two and does not accept an inclination to either side. It is important for the

middle-way to include both sides in balance.

Environmental problems are always accompanied with both benefit and disadvantage. For example, human society will reap benefits from exploiting natural resources such as catching fish, but nature will be at a disadvantage from the loss of fish stock. Moreover, advanced economies have removed many natural resources from the land of emerging economies. In this case, the advanced economies will receive benefit while contrarily the emerging economies will have the disadvantage of loosing resources. Whenever human societies obtain natural resources, the destruction of nature always follows. Therefore, when considering environmental problems, the wisdom of the "middle-way" in Buddhism demands the equal distribution and harmony of benefit and disadvantage to all sides.

In the first half of this paper we only discuss global warming amongst various environmental problems. Actually, many other environmental problems exist. The question is how Buddhism can contribute to resolving these issues. It is necessary to explain and expand further. Let us next examine environmental problems using the three categories of advanced economies, emerging economies and natural ecosystem which include animals, plants and microbes. It is necessary to examine the three categories in relation to various environmental problems, *i.e.* global warming, deforestation, decrease in biodiversity, etc. that exist today. It is also important to discuss how the three categories must be in harmony with each other in order to solve environmental problems towards the future. This is the essence of the concept of Earth ethics in Buddhism.

For instance, today there is a clear inclined advantage towards advanced economies when compared to emerging economies. When we consider the relationship between advanced economies and the natural ecosystem, the advanced economies have received a tremendous amount of one-sided benefit. Further, people living in emerging economies also sell their natural resources such as trees and obtain benefit from the natural ecosystem as well. However, it is important to point out that the size of the benefit is considerably smaller when compared with people living in advanced economies. All in all, it is the advanced economies that are receiving the biggest benefit from exploitation of natural resources. On the other hand, the natural ecosystem is receiving the most disadvantages of the three categories. In short, human culture and society have hardly returned any benefit to the natural environment. The people in advanced economies are one-sidedly receiving natural resources and living comfortable lives. Thus, in the future it is critical to find and return a

harmonic relation where all categories balance the beneficial aspects, particularly towards nature.

Proper Earth ethics must employ an efficient and balanced view of consumption of natural resources rather than a shallow attitude of how to utilize resources, or "whether to take this or that". The way of thinking based on the wisdom of the "middle-way" in Buddhism approaches natural resources by efficiently balancing both the pleasure-and-pain, or benefits and disadvantages of consumption. From this viewpoint, the question is not "whether to take this or that" from emerging economies or the natural environment rather, how can all categories benefit accordingly. For example, Buddhism would not dwell on how to utilize emerging economies or natural resources but rather try to resolve a means in which all life experiences the enlightenment of the middle-way of pleasure-and-pain. This is the concept of Earth ethics. Since the entire planet is one vehicle comprised of humans and other organisms, it is critical to maintain harmony amongst all aspects. Therefore, it is not important to contemplate what has and doesn't have value rather, it is necessary to treat all categories and components as part of a whole system.

Another important unbalance is how advanced economies are monopolizing all of the benefits. It has become increasingly necessary to search for an ideal method to accommodate desires without sacrificing others. When the relationship between carbon dioxide emissions per person (Index 1) and the emissions per person to gross domestic product (GDP) in US$ (Index 2) for every country in the world is examined, we see four country groups or categories emerge[4]. The indices comparisons suggest that the higher the amount of carbon dioxide per person is the more people in the country are living a luxurious life and the higher the value per gross national product the more people are using energy inefficiently. The four groups are as follows,

Group 1: United States, Australia and Canada:
Index 1: 16–21 $CO_2$-t/person
Index 2: 0.65–0.70 $CO_2$-kg/GDP
Group 2: Russia and Poland:
Index 1: 8–10 $CO_2$-t/person
Index 2: 0.9–1.48 $CO_2$-kg/GDP
Group 3: China, India, Brazil, Malaysia and Mexico:
Index 1: 1–4.5 $CO_2$-t/person
Index 2: 0.25–0.72 $CO_2$-kg/GDP
Group 4: Deutschland, Japan, United Kingdom, New Zealand, Italia and France

Index 1: 4.7–10.2 $CO_2$-t/person
Index 2: 0.25–0.45 $CO_2$-kg/GDP

Group 1 is comprised of countries that live the most luxurious life in addition to exhausting a large amount of carbon dioxide. Group 2 is the most inefficient likely due to technological hurdles. Group 3 which include the most populous countries of China and India as well as many emerging economies are the most inefficient and the degree of luxury is also low. Groups 4 include some of the most advanced economies where efficiency is good to some degree and the living standards are also high. However, the group is not considered to be an ideal example of $CO_2$ emissions. The ideal value for $CO_2$ emissions are Index 1 values fewer than 4 and under 0.25 for Index 2. Ideal values are found under the mean of Groups 3 and 4. From these results it can be said that Group 1 should make efforts to greatly reduce their living standards in addition to raising efficiency, while Group 3 has room for raising their living standards. Moreover, Group 2 should make more efforts to increase efficiency, and Group 3 should also raise efficiency accordingly. Therefore, to keep harmony in the world it is vital that people in advanced economies endure.

## The Bodhisattva code of conduct and ethics norm

Finally, we would like to describe the ideal code of conduct and ethics norm in Buddhism as it relates to environmental problems. Schrader-Frechette, K.S. (1981)[5] describes that human beings are miserably incompetent in decision-making and ethical thinking although they have many analytical strengths in the area of science and technology. In other words, the behaviors of people are not inherently ideal. Do human beings have the capability and methods for ideal behavior? We think that maybe some contrivance is necessary. Human society generally requires a good reason (profit or incentives) for conducting good intentions. Thus, it is important for a system to be designed that offers some positive incentives or profit for good intentions towards environmental problems. This is only possible if an efficient profitable system is designed in society. For instance, some good examples are the tax reduction incentives and subsidy allocation when contributions are made to conserving and protecting the environment, such as buying energy conserving products. In short, it is necessary to design a system that has visible and concrete results for those who help solve environmental problems.

From a Buddhist perspective, solving and contributing to the eradication of environmental problems is itself part of the practice of Buddhism. In other words, solving environmental problems is a natural aspect of the Buddhist philosophy of the middle way. One important example is the practice of the way of the Bodhisattva using the six *paramitas*. The six paramitas are composed of *Dāna paramita* (generosity), *Śīla paramita* (morality), *Kshanti paramita* (patience), *Vīrya paramita* (effort), *Dhyāna paramita* (unwavering) and *Prajñā paramita* (wisdom); Dāna paramita means doing something good without regret for a person and nature, Śīla paramita means upholding precepts such as not hurting or killing living entities and not stealing, Kshanti paramita means enduring sadness and pain, Vīrya paramita means doing your best and always making effort to do better, Dhyāna paramita means being unwavering or steadfast in all endeavors, and Prajñā paramita means obtaining true cognition of wisdom from the concepts of "dependent origination" and the "middle-way." Actions and perseverance for solutions towards environmental problems corresponds to the Bodhisattva way very well. It is even more important to establish the true meaning of the six paramitas as a intuitive part of Buddhist practice, which is not something separate from protecting and conserving the environment. In other words, a Bodhisattva who practices the six paramitas is someone who is acting in accordance with protecting the environment and reducing environmental problems. Buddhists will be able to contribute to solving environmental problems more positively if these codes of conduct and ethic norms are maintained in Buddhist practice.

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