Deep Ecology in Action:

A Cross-Cultural Series of Case Studies on the Conservation Efforts of Monks and Religious Leaders in India, Mongolia, and Thailand

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ABSTRACT: Deep ecology is a relatively new branch of study which combines different fields of knowledge such as philosophy, religion, and sociology, on the one hand, with environmental studies, on the other. The basic premise of deep ecology is the interconnectedness of all life and consequently, a concern for the ecological well-being of our planet, which is increasingly threatened by the impact of modern human lifestyles. Recently, there has been a lot of recent attention given to deep ecology movements in Asia. However, these studies often lack the interdisciplinary background in science necessary to assess a real ecological impact. This study is based on a series of case studies was conducted in India, Mongolia, and Thailand across a variety of faiths and locations. By investigating specific cases across cultures and religions and drawing comparisons between the impacts of minority religions and majority religions, the true environmental potential and value of deep ecology movements is analyzed.

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1.0 INTRODUCTION

With the various environmental complications that have resulted from global climate change, the pressure for ecologists to come up with a solution is increasing daily. This is obviously not a simple task. In formulating a plan, scientists need to abide not only by environmental restrictions, but also by those of local economies and cultures – where the true challenge tends to arise. Often, modern ecologists can identify the source of the problem very efficiently. However, many methods they suggest for solving it are either financially or culturally unfeasible, that is if they can come up with a solution at all. I recall once reading an article that reported ecological research done on endangered corals in the Mediterranean Sea. The authors had indeed pinpointed the source of the problem quite easily: frequent disturbances caused by recreational diving and snorkeling was destroying old coral colonies and preventing new ones from living very long. However, when it came time for the authors to suggest what the next step should be in order to conserve and rescue these coral populations, their solution was anything but realistic: to eliminate all tourists diving in the region.[1] To follow through with this plan would mean forcing many people to lose their jobs, thus burdening the local economy. I became aware of this sort of problem during my stay in Thailand, where many of the towns I visited seemed as though their entire economy revolved around tourists coming and spending

1 Christina Linares et. al. 2007. " Life History and Viability of a Long-Lived Marine Invertebrate: The Octocoral *Paramuricea clavata*." Ecology 88, pp. 918-928

their money on diving, boating, and snorkeling (although I do not think the situation is as extreme in those towns along the coast of the Mediterranean, I assume they would feel a great economic strain if diving were to be discontinued as well).

How are we to solve the environmental crisis when our leading researchers fail to come up with a realistic plan for change? Environmentalists need to find a way to consider every possible angle when looking for a solution to the current ecological problems. This requires an interdisciplinary understanding, one that encompasses elements of economics, psychology, natural science, sociology, and religion to understand the relationship between humanity and the environment. This is precisely what "deep ecology," as defined by the Norwegian philosopher Anne Naess in the early 1970s, attempts to do. Deep ecology is a recent branch of study that, instead of trying to work against mainstream society to solve environmental crises, it uses it as part of the answer. By doing this, it works toward reaching a goal of making sound environmental ethics an integral part of everyday life. Deep ecology theories often state that the world religions can provide a model for environmental action and ethics if utilized correctly.[2] Furthermore, scholars have commented that environmental efforts, such as the *World Conservation Strategy* published by the United Nations Environmental Program, will fail "… without a spiritual force exercised through religious movements."[3]

Scholarly work on deep ecology had a rocky and controversial beginning. It began with environmental historians and philosophers pointing out the indigenous societies and religions were much more "ecocentric" than Western religions.[4] Using the example of Native Americans, the argument was made that these societies treated the land, and thus all of nature, as sacred. Their lifestyles were sustainable and efficient, as they used resources in a manner that neither

2 George Sessions. 1987. "The Deep Ecology Movement: A Review." Environmental Review 11, p 106.
3 J.M. Boyd. 1984. "The Role of Religion in Conservation." The Environmentalist 4, p. 41.
4 Sessions, p. 106

exploited nor wasted them. But fast forward to the introduction of a new society into the land: European settlers. Soon after, the habitat of North America experienced drastic changes and a general trend toward degradation. Scholars claim this is because the new society that colonized the area held a more anthropocentric view of life – one that placed humans above the rest of the natural world.[5] Advocates for this school of thought place a large amount of the blame on Christianity for not only desacralizing nature but also condemning religious practices that do hold nature sacred as idolatry. In addition to this, these scholars say that Christian theologies have shaped most modern urban societies and formed the basis for the legal and ethical principles that those societies practice. The most radical idea, however, is that it is not only that Christianity enforced a careless attitude toward nature, but that it is actually fueling an innate desire to conquer and ultimately separate ourselves from nature by means of technology and science.[6] One can imagine the unpopularity of these ideas when they were first suggested. There are indeed a number of deep ecologists that adopt this aggressive attitude in their writings and rush to place the blame on someone or something in order to justify their thoughts. However, the point of this paper is not to place the blame on anything, but rather look for solutions.

One cannot deny the power religion has to motivate large masses of people. History has proven this time and time again, whether it be Muslim holy wars, Christian crusades, or the peaceful protests of Mahatma Ghandi: each historical event was informed and heavily influenced by respective religious ideologies or principles. Religions shape the course of time, often causing drastic events, both good and bad, that otherwise may have never occurred. At the risk of sounding dramatic, humanity is facing a time when the environmental crisis can potentially

5 Lynn White Jr. 1967. "The Historical Roots of Our Ecological Crisis." Science 155, pp. 1203-1207.

6 Ibid, p. 1205. The statement made by Dr. White may, I feel, have some basis in truth but overall is a rash overgeneralization. I do not believe the problem is Christianity, but rather certain ways people can be taught Christianity. There are a number of Christian movements within the deep ecology field, one of which I will investigate. In fact, the Orthodox Christian church is very much environmentally active, the ecumenical Patriarch of the Church being named one of the most environmentally ethical religious leaders in the world.

reach a point where the consequences of our actions are not reversible. The current situation calls for changes on a global scale. Therefore, it makes sense to look to religion – something that is well established as a great source of motivation – to serve as a potential solution to the problem. Indeed, deep ecology movements are observed all over the world in a wide array of different societies. There are also a number of organizations, both governmental and non-governmental, that are founded on theories of deep ecology. One example of this is the Alliance of Religion and Conservation (ARC), a group that works with all of the world's faiths to educate people on the environment and organize activities and projects to work for conservation.[7]

Controversial as it may sound, I argue that not all religious groups are created equal in terms of the impact they have made or still can make on the environment. This is not to say that one particular faith is better than another. One would think that there is a correlation between the number of adherents to a religion within a society and the actual potential the group has to create an environmental impact. However, this is not always the case – a minority religion in a specific culture may have the potential to bring about large-scale changes necessary to change the environment, especially if they can make an appeal to the larger global community of that faith, as I will provide evidence for later on. Additionally, ecological impacts made by religious groups depend on how ideas embedded in the theologies of each religion are interpreted by the respective group, which will influence how their resources are used.

Last year, I left the United States on a trip through Asia to investigate the role religion can play in conservation first hand. I began in Mongolia, where I lived and studied for two months before venturing to India, where I lived with a host family and conducted research for another two months. I ended my trip in Thailand, where I continued my project for another three months. I chose to investigate the activities carried out by monastics and religious leaders

7 Their website can be found at www.arcworld.org.

because I believe this serves best as a model of deep ecology in action due to their role as examples of how the general public should strive to live. During the entire journey, I visited a total of eighty-six different temples, monasteries, and churches of seven different faiths (only a fraction of these were actually working on environmental projects and thus, only eleven appear in this paper). The frequency and abundance of religious establishments I noticed just confirmed my belief that deep ecology, because of its connection with religion, has a great potential to solve the environmental crisis. Hence, the focus of this paper will be to investigate the role religion could play as an element in solving current environmental problems in Mongolia, India, and Thailand. This analysis will be broken down for into four parts: first, an analysis of the current environmental crises each country faces; second, the specific principles that have led scholars to conclude each specific religion is "ecologically friendly;" third, a breakdown of the environmental activism that individual monasteries, churches, and temples are doing; and finally, a summary of personal conversations with monks and religious leaders in an attempt to uncover *why* they personally feel a need to help the environment. In the conclusion, I will compare the cases presented cross-culturally looking specifically at how various faiths approach similar problems, how the same faith can function differently in a different culture, and the limitations certain faiths have in certain cultures. Through this systematic analysis, the deep ecology movement will be highlighted as a potential solution to current environmental crises.

2.0 INDIA

India has been facing a number of environmental problems that have shown no prospect of having a simple solution. Indeed, if the current trend of living style and development is continued, environmentalists claim India's land will become irreversibly degraded.[8] This is largely a result of past government mismanagement of natural resources, high poverty rate, and large population growth rate. The current population of the country is 1.15 billion, which accounts for 17% of the total world population.[9] By the year 2020, this number is believed to increase to 1.62 billion.[10] The fact of the matter is that this fast growing population is putting more and more strain on already-existing problems, making them more difficult to remedy by the day. I will list and explain each environmental problem in a systematic and concise manner.

The first major issue is the rapid degradation of the land. Recent years have seen an extremely poor biomass productivity, resulting from the declining condition of soils. In addition to this, climate change has made land more susceptible to droughts – making it less retentive of moisture due to high evapotranspiration rates. Overgrazing by livestock and over-extraction of plants by humans has combined to create a very fragile soil that is quickly eroded by the powerful monsoon rains. Land degradation further leads to sedimentation of water sources and then subsequent flooding of other areas. Although this is not ecologically related, it is worth

8 B. Bowonder. 1986. "Environmental Management Problems in India." Environmental Management 10, p. 599.
9 CIA Factbook: India. 2009. Available online at www.cia.gov.
10 Bowonder, p. 599

mentioning that the land is consequently losing its farming capacity at an alarming rate – causing a serious concern about how such a large population will be sustained.[11]

Next, the high rate of deforestation has severe implications for the state of India's ecosystems. Again, this is related to the large amount of poverty in India. People need some sort of fuel for cooking and the forests provide short-term gratification. Furthermore, with the land degrading, livestock herders are turning their animals to the forests for grazing. India has a very large proportion of the world's livestock: about one-fourth of the world's cattle, one-half of the world's buffalo, and one-fifth of the world's goats. Deforestation is another leading cause of the land becoming more vulnerable to erosion and desertification. In this sense, the current standards of living have created a vicious cycle: degradation causes deforestation, which causes more degradation. These problems are very difficult to monitor because most of the tree removal is done illegally or off the record. Of course, when this occurs, there is little to no effort made to replace those trees extracted.[12]

Loss of biodiversity is then a consequence of those two problems. The United Nations Environment Program has identified India as a megadiverse country, meaning it is one of 17 countries that contain the majority of the world's species. At the new millennium, it was estimated that India contained an astounding 17,000 plant species and 2,000 animal species (insects excluded) – of those, 1500 plants and 150 animal species were considered to be threatened.[13] Those numbers have only increased due to growing environmental strain. Biodiversity is thought to be important in providing an ecosystem with a trait of resilience. That is to say, a more biodiverse environment will be more resistant to the effects of disturbances and

11 Ibid, pp. 600-601
12 Ibid, p. 601
13 VS Vyas and V Ratna Reddy. 1998. "Assessment of Environmental Policies and Policy Implementation in India." Economic and Political Weekly 33, p. 50

climate change.[14] Particular species can have a more profound role in the shaping the environment than others. For example, the Asian elephant, whose numbers have severely declined over recent years, acts as an ecosystem engineer altering the abiotic conditions of the environment creating new niches for other organisms to inhabit. They construct "elephant paths" throughout the tropical forests of India, making it possible for other species of smaller organisms to easily move through the jungle.[15]

A number of additional problems exist due to increased population growth in combination with mismanagement of waste and pollution. Air quality has significantly decreased over past years from automobile exhausts in urban areas and fuelwood burning in rural areas. Water pollution is a severe issue – almost every single water source from rivers to lakes to groundwater sources exhibit extreme pollution (90% of which is due to sewage, 10% from industry).[16] The Ganges River, the most sacred river in India, is one of the most polluted waterways in the world. An estimated 300 million gallons of waste go into the Ganges each day, having doubled in the past 20 years. Recent water sampling carried out in Varanasi revealed that the Ganges contains a count of bacteria that is over 10,000 times the World Health Organization's standard for bathing water. And yet, people from towns all across the Ganges bathe in it daily.[17]

Of the three countries I investigated, the current situation in India proves to be the most complicated and the most dramatic. It is therefore imperative that solutions to resolve these issues are found quickly before the current conditions become irreversible.

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14 F. Stuart Chapin III et. al. 2000. "Consequences of Changing Biodiversity." Nature 405, pp. 234-235.

15 Stephen Blake and Simon Hedges. 2004. "Sinking the Flagship: the Case of Forest Elephants in Asia and Africa." Conservation Biology 18, pp. 1193.

16 Bowonder, p. 602

17 Ganges River – Tremendous Pollution. Available online at ecologicalproblems.blogspot.com/2008/05/ganges-river-tremendous-pollution.html

2.1 RELIGIONS OF INDIA AND ENVIRONMENTAL THEOLOGIES

In what follows, I will highlight some ideas from three Indian religious traditions – Hindu, Buddhist, and Jain respectively – in order to show how they may be relevant in addressing some issues in deep ecology.

2.1.1 Hinduism

In the Bhagavad-Gītā, a sacred Hindu text, Krishna reveals himself as an incarnation (*avatara*) of the god Vishnu, the preserver of the universe.[18] Commenting on the characteristics of the ideal Hindu devotees, Krishna says "Mastering their senses, with equanimity toward everything, they reach me, *rejoicing in the welfare of all creatures*."[19] The Gītā also describes the way of selfless action and sacrifice not for the sake of a reward, but instead for the benefit of all creation.[20] This coincides with a widespread Hindu notion that everything exists within an Absolute, or Brahman, hence implying a sacred element to all life. Hindus are asked to see God in every person, object, animal, and any other aspect of the world. This has been interpreted to mean that it is humanity's dharma, or duty, to treat everything (including nature) with respect.[21] As Krishna states in the Gita, "I am the seed of all creatures; nothing animate or inanimate could exist without me."[22] This again illustrates the idea of panentheism, namely, the divine presence

18 Interestingly enough, Krishna comes down to the earth in order to restore the Law (*dharma*). Hindus believe in a cosmic cycle of destruction and rebirth of the universe. The trinity (*trimurti*) of gods oversee this cycle. Brahma creates it, Vishnu preserves it, and the Shiva destroys it. According to Hindu cosmological calendars, we are currently in the Kali Yuga, the last stage of the cycle before the impending destruction and rebirth.

19 Barbara Stoler Miller trans. 2004. The Bhagavad-Gītā. New York City: Bantam Classic, p. 109, emphasis mine

20 Ibid, pp. 123-126.

21 Martin Palmer and Victoria Finlay. 2004. Faith in Conservation: New Approaches to Religion and the Environment. Washington DC: The World Bank, Inc, pp.91-95

22 Gītā, p. 96.

in everything, and so, theologically speaking, there is a sense of duty to protect the material nature.

Since all life-forms are seen as divine, there is a oneness that humans share with all other forms of creation. Everything is on equal playing field in the universe each person and animal has its own role to play. Therefore, it is believed that a kinship exists between all life. Many Hindu texts, including the Hymn to the Earth found in the Atharva-Veda, preach treating animals as our own children. Some animals and plants are even associated with certain deities, which grants them a special status and reverence.[23] In some Hindu scriptures, we even find reference to the earth as one great female deity, known in the earlier texts as Prithvi, or Bhu-devi. Stories featuring Prithvi, for example, illustrate her taking offense to human immoral actions that are directly harming the earth itself. The implicit theme of these stories is the reciprocity that should exist between humans and nature: Prithvi will bear and feed humans if they in turn take good care of earth well.[24] In addition to Prithvi, there are a great number of local or regional goddesses, associated with particular places and landscapes. It is considered disrespectful to the local goddess to destroy her home through environmental destruction.

23 Karan Singh. 2005. "Essays on Hinduism: Declaration .of Nature." Available online at www.karansingh.com

24 David Kinsley. 1995. Ecology and Religion: Ecological Spirituality in Cross-Cultural Perspective. Englewood Cliffs, NJ: Prentice Hall, Inc, p. 58.

2.1.2 Buddhism

In the traditional Buddhist view, it is believed that the world is full of suffering (*dukkha*), that the cause of suffering is "thirst" or desire, that there is a way out of it, and that the way consists of the eightfold path, which ultimately leads one to enlightenment (*nirvana*). This is a summary of what is said in the Four Noble Truths of Buddhism. The Noble Eightfold Path, which includes eight elements that teach Buddhists to lead a correct and ethical life. Implicit in this idea is the principle that suffering is increased by causing unnecessary harm to another human or living being in general.[25] This has lead to the principle of nonviolence (*ahimsa*), existing at the core of Buddhist beliefs. In particular, stories of the Buddha's quest for enlightenment portray an interesting reaction to observing this suffering. In one story, Buddha is watching a farmer plowing his field. Immediately, he thinks of all the suffering that the small organisms on the ground are experiencing because of the plow and he starts to weep for them. This serves to illustrate the concept that enlightened Buddhists' empathy should extend so as to include the feelings and sufferings of all other creatures.[26]

In direct correlation to the principle of *ahimsa* is the idea of connectedness of all forms of life. According to some teachings of Buddhism, separation between organisms is an illusion; instead, everything is part of a bigger essence.[27] The overall "health" of the whole is therefore directly affected by that of each of its parts. In fact, the ideal of Buddhist life on earth, particularly in the Mahayana form of Buddhism, is the enlightened *bodhisattva*, who is noted for his/her vow to remain on earth in order to alleviate the suffering of all the world's creatures in

25 Martin Palmer and Victoria Finlay. 2004. Faith in Conservation: New Approaches to Religion and the Environment. Washington DC: The World Bank, Inc, pp.78-82

26 David Kinsley. 1995. Ecology and Religion: Ecological Spirituality in Cross-Cultural Perspective. Englewood Cliffs, NJ: Prentice Hall, Inc, pp. 84-85.

27 Society for the Promotion of Buddhism. 1998. The Teachings of Buddha. Tokyo, Bukkyo Dendo Kyokai, pp. 102-104.

order to help the whole.[28] One additional principle of Buddhism that is worth investigating is the traditional lifestyle of moderation and simplicity. Many Buddhists choose their professions to be in accordance with principles of moderation and non-violence, therefore abstaining from occupations that involve killing, production of weapons, etc. Buddhism further teaches techniques to help one master their ego and with it tendencies toward self-indulgence, squandering of resources, and striving for power.[29] This is not meant to apply to only those in monastic training, but for all practicing Buddhists. Part of the road to purification is learning the "proper use of all things," which implies taking only what is absolutely necessary, wasting nothing.[30]

In Buddhism, generally speaking, humans control their own destiny. Humans must therefore strive for improvement and progress, rather than destruction and regression.[31] This therefore reinforces an individual's motivation to take it upon oneself to act correctly because there is no fatalistic element. This is also related to the concept of *karma*, which literally refers to an action that is bound to bring about a reaction – in other words, *karma* is a causal principle. The concept has its origin in Hinduism, but all Buddhists believe in it, too. *Karma* is what keeps mankind in the cycle of death and rebirth and doing bad actions will give you bad results, thus hindering one's ability to break the cycle and achieve enlightenment. Each human being is responsible for his/her own actions and therefore controls the results they get. If one acts correctly toward nature with good intentions, one will get good results. If one acts destructively toward nature with careless intentions, one will get bad results.

28 Kinsley, pp. 88-89.
29 Ibid, p. 91.
30 The Teachings of Buddha, p. 230.
31 Ibid, p. 88.

2.1.3 Jainism

The principles of Jainism that are ecologically friendly are quite similar to those of Hinduism and Buddhism, but are in some cases taken to extremes. *Ahimsa*, again, plays a role in this religion, as it is the most important ethical principle. For example, Jain Digambara ("sky clad") monks are famous for for not wearing any clothes and sweeping ahead of them with a broom of feathers (that were naturally dropped by peacocks, not plucked) in order to prevent unsuspecting insects from getting crushed by their feet. Oftentimes, they also wear a cloth over their mouth to prevent inhaling insects. These seemingly odd practices are the manifestation of an extreme adherence to the non-violence principle of *ahimsa*. The Tattvartha Sutra, a Jain sacred text, teaches that there are no fewer than eight million species of creatures in this world and every single one of them is part of *samsara*, the cycle of death and rebirth. This, in a way, grants them the equal status to humans, meaning they must be treated as such.[32] In addition, the Jains "animate" the universe, teaching that everything from "a clod of dirt or a drop of water" to what science teaches us as accepted living organisms possess the same common trait: a *jiva*, or soul. This uniting life force again goes hand in hand with the idea that all life is interconnected and must be treated as sacred, which means that a great attention is paid to one's actions in the world, or to *karma*. Thus, Jainism teaches that this interdependence of life implies that "if one does not care for nature one does not care for oneself"[33] – in other words, what one does to another living being, one is really doing to oneself

Jains are also taught to adhere to principles called the Three Jewels. It states that one must practice right knowledge, right faith, and right conduct. Right knowledge mandates an understanding of karma and samsara. Right faith just means that one believes in the basic

32 Clothey, pp. 37-40.
33 Palmer and Finlay, p. 108.

teachings of the Jaina gurus. Right conduct is adherence to the five vows of Jainism: ahimsa, truthfulness, non-stealing, chastity, and detachment. *Ahimsa* has already been discussed, but non-stealing and detachment also have interesting environmental implications. This idea of non-stealing also includes avoiding greed, something that promotes a lifestyle of moderation and preservation. Detachment means limiting your worldly possessions to avoid becoming bound to this domain. These vows then teach Jainas to avoid wasteful and frivolous action, similar to the simple lifestyle Buddhism implies.[34]

The concept of *karma*, which also exists in Jainism, takes on a bit of a different definition than seen in either Hinduism or Buddhism. First, we must understand the Jain world view. It is believed that the world exists across three hierarchal domains: the bottom contains various forms of hell, the top possessing various forms of heaven, and the planet residing somewhere in the middle. Karma is something that one accumulates on one's *jiva*, as if a sticky substance that adds weight to the soul pulling it in a downward motion. Bad deeds add more *karma* onto the *jiva* while good deeds release it. If one leads a life of sin, the *jiva* will collect so much *karma* that it will be pulled down into hell. The opposite of that is that if one adheres to the three jewels of Jainism, their soul will move upward into the heavens.[35] Certain Jain holidays and festivals also carry environmental themes. For example, the festival of Paryushana is a time to reflect and meditate on the events of the past. A heavy emphasis is put on considering the "cardinal virtues of...simplicity...self-restraint...detachment... [to see] it as a festival of reflection on our actions to the natural environment, and the consequences of that."[36] This time is thus often used to decide how Jainas can help the environment in the following year to better their *karma*.

34 Ibid.
35 CK Chapple, pp. 207, 211.
36 Palmer and Finlay, p. 109

2.2 CASE STUDIES IN INDIA

2.2.1 Belur Math, Kolkata

Belur Math sits right on the shore of the Hooghly River right outside of Kolkata. Home to the Vedanta movement of Hinduism in the tradition of Sri Ramakrishna, it serves as the headquarters of both the Ramakrishna Mission and the Ramakrishna Math. Sri Ramakrishna was a great 19th century mystic and saint from Bengal who is regarded by his followers as the prophet of the modern era. A disciple of his is believed to have consecrated the grounds of the temple himself at the end of the 1800s.[37] Vedanta Hinduism is slightly different than other practices of it, in that it emphasizes the harmony of all religions based on Sri Ramakrishna's epiphany that all religions realize the same ultimate reality, only calling it a different name.[38] The Ramakrishna Mission (RKM) is a registered NGO that is lead by the monks of the Ramakrishna Math. Their primary goals, other than spreading this idea of the unity of all religions, are to work in service to man and to God. They work to help the impoverished populations of India through education, medical service, and helping small villages in the field of rural development. Although the RKM does not directly work to help the environment, rather focusing their efforts on philanthropic work, often the results of their rural development co-laterally help the environment.[39] This ecological impact can take various forms, whether it is educating the local people to have a more sustainable relationship with the environment or it is improving environmental conditions jointly with improving local living conditions. I investigated two specific examples of these efforts: the electrification project and the landshaping project.

37 Belur Math: The Headquarters Ramakrishna Math & Ramakrishna Mission. Available online at www.belurmath.org
38 Ibid.
39 Ibid.

First, I will discuss the electrification project for the Sundarbans (the mangrove swamps and islands of the Ganges River delta). Communities that live in this region of West Bengal have traditionally depended on gasoline generators in order to produce the necessary electricity. Efforts have been made by the RKM to get these communities a renewable source of energy instead. The RKM hired a number of technicians and engineers in order to install hundreds of solar home power units. This has greatly reduced the amount of fuel burning taking place in the Sundarbans, and thus the amount of air pollution.[40]

The landshaping project aimed to help the population of the Sundarbans increase their agricultural efficiency. It involves adding new topographical formations into the landscape in order to create series of ponds and uplands. By doing this, farmers of the region are able to grow approximately 50% more crops, including fruit trees, rice, vegetables, fuel plants such as leucaena, and have a suitable environment to raise chickens. Additionally, the ponds they create are well-suited for fish breeding. With the use of landshaping, farmers no longer have to remove trees from the forest for fuel, because they instead use the leucaena plant and rice straw. Illegal hunting in the forests has also decreased since more families have access to enough fish and eggs. Finally, the river ecosystems have been on a steady road to recovery, since local women no longer disturb it trawling the river for fish.

It is interesting that these projects have such profound effects on the environment, because that is not their primary goal. Rather, the focus of the Vedanta RKM's projects is to ease the suffering of the poor. When I even initially asked a monk of Belur Math about these environmental projects, he had no idea what "environmental projects" I was referring to. It left me with the impression that they did not even realize how much of an impact on the Sundarbans

40 Jack L. Stone and Harin S. Ullal. 1997. "Ramakrishna Mission Initiative Impact Study – A Rural Electrification Project in West Bengal, India." AIP Conference Proceedings 394, pp. 521-27

ecosystem they actually had. Their drive to help humanity definitely overshadows a drive to help the environment. Once I mentioned specifically the electrification and the landshaping projects, I then received an answer for their motivation. He quoted the motto of the RKM -- "to work for one's own salvation, and for the welfare of the world." I interpreted this as meaning one must therefore work for the greater good of humanity in order to better one's own karma. The person who is offered the service is helped physically, while the person doing the service work is helped spiritually. Furthermore, the monk mentioned that such service work is considered the way of discipline (aka karma yoga) to honoring God. Helping the poor improve their quality of living is thus equated with spiritual practice.

Ecologically speaking, it is very difficult to evaluate the extent to which these projects have been effective in improving the Sundarbans ecosystem. It would require long-term monitoring to see if and how fast the Sundarbans can recover from the years of unregulated deforestation and disturbance. One would assume, if the electrification and landshaping projects have longterm sustainability, that air pollution should reduce dramatically and forest/river ecosystem regeneration should occur naturally. If these projects are maintained by the RKM and population increases do not create more pressure and demand for natural resources on the Sundarbans, then these projects show great potential for environmental improvement.

2.2.2 Shri Jagannath Temple, Puri

The Hindu Bhakti movement, generally associated with temple culture and various festivals for local deities has also had implications for conservation. Often, this can result in a legitimization for protecting the local environment by proclaiming the immediate forests and ponds surrounding the temple sacred. Furthermore, annual festivals often call for a need to regulate local natural resources, which serve a significant purpose in the celebration and thus need to be available year after year.[41] This is exactly what happened in the case of the Jagannath Temple in Puri, in the state of Orissa.

The Lord Jagannath (the Lord of the Universe), to whom the temple is devoted, is particularly important to the worshippers of Vishnu and Krisna. The temple serves as a major pilgrimage spot for both Vaishnavas[42] Hindus, and also visitors from around the world. With construction completed almost 800 years ago, the Jagannath Temple is arguably one of the most famous Hindu temples in India. The majority of the forests in the surrounding area all over Orissa are currently state-owned; and consequently, poor management and the pressures of population increase have led to the exploitation of its natural resources. However, the forests have a deep religious significance due to their role in the annual Chariot Festivals (called Rath Yatra), during which three main temple deities are placed in the chariot for procession. The holy Sal trees of the Orissa forests are used for the construction of three huge chariots for the Shri Jagannath temple, yet rapid depletion of trees seen over the past twenty years may threaten the future of this tradition.[43] An astounding number of people attend this festival every year – therefore, it has a great social and religious significance. By forging a deep connection between

41 Gosling, p. 29.

42 Vaishnava refers to the school of Hinduism that focuses its worship on Vishnu and his *avatara*, particularly Rama and Krishna.

43 "Orissa Forests and Their Management." 2008. Available online at www.arcworld.org.

the Jagannath temple and the Orissa forests, the commitment of the Hindu people to protect the forests and hold them sacred has been deepened. There has also been a movement to restore areas of the forest and begin planting new trees. Although the project is relatively new, to date nearly ten square miles of trees have been set aside as conservation zones. Through a devotion to Lord Jagannath, which has been a key aspect of the local culture for so many centuries, Hindus are asked to respect the sacredness of the forests and help prevent their extinction.

Why is this particular tree so important? A monk of the Puri temple began by explaining to me that timber is a symbol of Lord Jagannath himself – signifying growth and reproduction. Jagannath is one of the many forms of the Lord Krishna, one of the most popular avatars of Vishnu. The deity itself has a stumpy body and therefore is very closely associated with the Sal tree. The monk went on to say that the Rath Yatra is a crucial festival in the Hindu calendar. Discontinuing it is simply not an option. It is done to commemorate events recounted in the famous epic, the Mahabharata, and is a way of showing one's devotion to Lord Krishna. Besides its holy significance, the tourism industry for that event is crucial for the local economy. The amount of land the temple has acquired so far is fairly significant. The forests of Orissa are known to have a rich biodiversity and thus, this project will work to conserve those organisms as well as the trees themselves. If the temple manages to regulate this land where they can manage a sustainable relationship of tree removal and regeneration, than this could greatly improve the longterm environmental situation in Orissa.

2.2.3 Burmese Vihara, Bodh-Gaya

The Burmese Vihara is a rather small temple complex run by Buddhists from Burma who established the monastery in order to house Buddhist pilgrims coming from Burma. Since Bodh-

Gaya is where Buddhism originated, it is not unexpected to find similar monasteries from countries all over the world located there. Within walking distance of the Mahabodhi Temple, the first Buddhist temple, and the Bodhi tree, under which Buddha received his enlightenment, the area holds a deep religious significance for all practicing Buddhists. Here, the monks of the Burmese Vihara attempt to emulate the successful tree replanting projects that have been occurring all over southeast Asia. Years of invasive tourism and local poverty in Gaya have definitely had a toll on the environment – the area could be described as dismal at best. Within the grounds of the rather small Burmese temple, they have a modest tree nursery where the grow specimens for the intention of replanting them in the otherwise dismal area of Gaya.

In this situation, monks are motivated by the religious significance of the area. The head of the Burmese Vihara explained that he wanted the area to survive into future generations so pilgrims could continue to travel to Bodh-Gaya on their path to enlightenment. The town should serve as an inspiration, and yet it currently is in a state of disrepair. He believes that all monasteries in Bodh-Gaya should work together to preserve the area, otherwise there could come a day when the place of origin of Buddhism is no more. The case of the Burmese Vihara is interesting because here we see not only a religious minority as the player, but an ethnic minority as well. I visited the monastery during the monsoon season, so tourism and pilgrims were almost entirely nonexistent. Therefore, the only monks residing there were the ones who lived there permanently, which was about five or six total. The fact of the matter is that such a small group of people cannot make much impact on the environment no matter how tireless their efforts. They simply do not have the resources or the manpower to efficiently carry out such a project. Perhaps in some other season, when conditions are not only more viable for tree-planting but also when there are more people around to help, they might be able to accomplish more.

This is not to say their efforts are entirely in vain. If they are indeed able to unite efforts between the other monasteries in the area, of which there are at least fifteen in Bodh-Gaya (from Japan, China, Thailand, Vietnam, and many others, including the Cambodian monastery still in progress of being constructed), then the project to rejuvenate the environment surrounding Bodh-Gaya can have the potential to succeed. Their primary weakness now lies within the limited number of people they have working with them.

2.2.4 Lal Mandir, Old Delhi

Lal Mandir, a Jain temple, sits right on the corner of one of the busiest streets in Old Delhi. It is the oldest and largest Jain temple in the city and is known for having a large community of followers. Often, Jains belong to the wealthier classes of society: merchants, bankers, businessmen, etc. So it would be fair to say that Lal Mandir has a decent amount of funding to support its service efforts. On the temple grounds, just adjacent to the temple itself, there is the famous Jain Bird Hospital, ran by monks and devout members of the community. Housing hundreds of birds, it is a true embodiment of Jainism's deep commitment to compassion for all forms of life. Jains all over Delhi find injured birds every day, whether their wounds are result of humans, machines, or other birds, and take them to Lal Mandir for treatment. Here, they are given proper nutrition and bathed in order to ensure a fast recovery. In addition to the ordinary "wards," there is also a critical care unit and a research unit, dedicated to improving treatment for the patients.

Although there were language barrier problems with the Jain monk working at the hospital at the time, he was able to communicate to me the main source of their motivation to help the injured birds of Delhi – the fact that they have a soul, and that merits them to be shown

the same compassion that is given to any life form. He explained that men from all over the city harm the birds, whether it is intentional or not, and this is not right. If it were not for the Jains' efforts, the birds would surely die in the harsh environment of urban Delhi. It should be noted that effort to conserve the bird population is done actively, a subject that I will come back to later.

Ecologically speaking, the efforts seen at Lal Mandir are not as efficient as they could be. While it is indeed endearing to see the efforts and resources the Jains put forward to help Delhi's birds, the actual environmental impact they make is questionable. First, let us examine the species of birds that most often reside in the hospital: partridges and pigeons. While it is commendable to help these individuals, it is also true that neither their death nor re-entry into the population is anything but negligible to the overall viability of the population. Both of these populations are extremely large; one or two individuals or even the hundreds saved by the bird hospital will not make much of a difference. While there are occasional patients that come from more exotic or rare species, such as the peacock that was hospitalized while I visited, Lal Mandir focuses too much of its efforts on less ecologically important individuals. This is where the Jain faith is a hindrance rather than an asset to environmental activism: it is not in the Jain principles to choose one bird over another – all forms of life are seen as equally important.

And yet, they do choose to an extent. That is to say, the Jains do not allow birds of prey or scavengers into the hospital. This is unfortunate, ecologically speaking, because those types of birds are most often the endangered species. A prime example of this is the Indian vulture, whose population has been decimated (seeing an estimated 99% decrease) in recent years due to herders providing their livestock with a certain kind of steroid that vultures then ingest, causing kidney failure.[44] If Jainas would save individuals of the Indian vulture species, it would have the

44 "Vulture Culture." 2007. The Economist. Available online at www.economist.com.

potential to make an ecological impact. When asked why predatory or scavenger birds were not allowed into the hospital, all that the monk said was that they did not want birds "that eat other birds."

Although current efforts are misguided at best, this shows how religious beliefs can be protective of some living beings but discriminate against the others due to an extreme interpretation of the ideal of *ahimsa*. Nonetheless, there is a potential for the Jainas of Lal Mandir to make a real ecological impact. However, it needs to be clarified whether their primary motivation is to help the environment or if it is to protect the sacredness of life and jiva – because in this instance the two have subtle differences in their results.

3.0 MONGOLIA

Despite the fact that Mongolia is one of the most sparsely populated countries in the world (2.8 million people over 156 million hectares), overpopulation in certain areas, as a result of its overwhelmingly uneven distribution, it is the source of one of its primary ecological problems. Ulaanbaatar, the country's capital, is home to over a third of the entire population. This high concentration of people in a small area has lead to a great deal of problems. Air pollution has been consistently increasing over the years, due to vehicular emissions and large amounts of coal burning coming from the *ger*[45] districts. Additionally, the increasing number of cars, industry, and power generation centers are contributing to the decreased air quality. These factors have lead to increased concentrations of sulfur dioxide and nitrogen dioxide (two gases that cause acid rain and thus, soil erosion and health problems for wildlife) and carbon monoxide, which contributes to the greenhouse effect and global warming.[46]

Herding and raising livestock is one of the fundamental components of Mongolia's way of life and economy. Unfortunately, herds of livestock have gone unchecked and have destroyed acres of grasslands that many native species depend on. In 1990, the national government decreased its number of employees resulting in almost double the number of herders. This lead

45 *Ger* is the word for "home" in Mongolian. It literally refers to the nomadic home that is traditionally used by Mongolian families. The home is usually made up of a simple wooden lattice frame and animal skin covering, with animal fat used for insulation. *Ger* districts refer to the areas of Ulaanbaatar and other Mongolian cities where there is a cluster of these nomadic homes. Since there are no zoning laws in Mongolia, when the mass migration of countryside families to the urban regions occurred, they would just set up their home on the outskirts of the city. These areas are noted for being populated by impoverished families.

46 P. Batima et. al. 2005. "Observed Climate Change in Mongolia." AIACC Working Paper 12, p. 4.

to competition between herders for space and thus, the abandonment of the traditional methods of rotating the lands that are used for grazing because herders did not want to leave their land for fear of returning to find it occupied by someone else.[47] The end result of this has been further depletion of the grasslands, in particular in those regions that are near densely populated areas. The environment as a whole is already extremely susceptible to disturbances due to the harsh, dry climate and the light, loose soils of the land.[48]

Also of great concern to Mongolian environmentalists is the overexploitation of natural resources by mining companies. Recent years has seen a great expansion of the mining industry (much of which is due to an influx of foreign companies) in order to capitalize on the wide variety of mineral and metal deposits that exist across the land. Companies are not mining with the environment in mind – rather they are greatly altering the morphology of mountains, if not decimating them entirely, and releasing a large amount of pollution into the environment in the process. This is of particular concern in sites near freshwater sources, where rivers and lakes are susceptible to water pollution.

The main concern of Mongolia, however, is water. Freshwater supplies are very limited and thus, must be conserved in order to sustain both human and animal populations. While climate change has resulted in Mongolia seeing more rain than ever, rates of freshwater consumption and evapotranspiration are more than overcompensating for that. The lack of natural surface water supplies and overpopulation of Ulaanbaatar has resulted in the ground water supply being slowly depleted around the capital city.[49] These dry conditions have also led to an increased frequency of forest fires. The combined effects of all of these factors contribute

47 N. Batnasan. 2003. Freshwater issues in Mongolia, Proceeding of the National Seminar on IRBM in Mongolia, 24- 25 Sept. 2003, Ulaanbaatar, p.55

48 "Mongolia Environment." 2009. Available online at http://web.worldbank.org.

49 Batima et. al, p. 5

to the rapid desertification of Mongolia. The Gobi Desert is growing at a rate of 3600km² per year, replacing areas that were once grassy steppes or forests.

3.1 RELIGIONS OF MONGOLIA AND ENVIRONMENTAL THEOLOGIES

3.1.1 Tibetan Buddhism

I briefly discussed Buddhism in general when discussing the religions of India. However, Mongolian Buddhism has a few elements specific only to it, most likely based on the influence of indigenous shamanism and worship of nature deities. Ancient rituals, including the worship of sacred mountains and *ovoos*,[50] have managed to survive to the present day by becoming incorporated into modern Buddhist practice. It is believed that the land, the water, flora, and fauna are all controlled by spirits, which can be called forth to help humans.[51] These spirits are capable of protecting livestock, preventing natural disasters, etc. But this protection for humans by the spirits must be reciprocated; humans must conserve and revere the site of the *ovoo* for the spirit to cooperate, otherwise it will become vengeful and destructive.[52]

There is a division in Mongolia between two sects of Tibetan Buddhism, the Yellow or Gelug-pa sect, and the Red or Nyingma sect. The Yellow sect is considered the dominant school of Tibetan Buddhism and puts a strong emphasis on an ordered, systematic road to enlightenment through discipline under the spiritual guidance of the Dalai Lama. The Red sect,

50 *Ovoo* are literally just a pile of rocks holding a wooden pole in place, from which Tibetan Buddhist prayer flags are hung. They are spots where the spirits of nature can be contacted. When one is traveling and comes across an *ovoo*, the traditional thing to do in order to bring good luck for one's journey is to walk around the *ovoo* three times.

51 Ibid, p. 9.

52 Northern Buddhist Conference on Ecology and Development. 2005. Available online at http://www.arcworld.org/downloads/UB_conference.pdf, p. 10.

however, does not follow the Dalai Lama, instead following the Karmapa Lama.[53] The Red sect is thought to have a less rigid, more fluid practice and puts less emphasis on karma than does the Yellow Hat Sect. Often, the Red sect is referred as the "unreformed church of Lamaism" while the Yellow sect is thought to be reformed.[54]

53 Hajime Nakamura and Philip P. Weiner. 1964. Ways of Thinking Of Eastern Peoples: India, China, Tibet, Japan. Honolulu, University of Hawaii Press, p. 308.

54 Li An-che. 1949. "The Bkah-Brgyud Sect of Lamaism." Journal of the American Oriental Society 69, p.51.

3.2 CASE STUDIES IN MONGOLIA

3.2.1 Gandaan Monastery, Ulaanbaatar

With around 900 monks and a number of facilities ranging from the Buddhist University of Mongolia to libraries and temples, Gandaan is one of the largest training sites for Tibetan Buddhist monks in the world. Before the Soviet period, the monastery was much larger. However, during this time the monastery was closed and parts of it were destroyed in 1938. The Yellow Sect monastery reopened in 1944, although they still could not practice freely due to very close watch from the government. In 1990, the Democratic Revolution allowed Gandaan to operate as it had before the communist rule. Gandaan has used its size and influence to support many environmental projects in recent years. In an effort to combat deforestation and desertification, tree-planting is one of Gandaan's major efforts. This has been made into a ceremony, which is thought to appease the natural spirits. However, this is not to say that the monks go around planting trees at random – rather, a lot of planning goes into deciding which species of trees are most fit to go where, how many are suited for a particular environment, etc. As part of the environmental education program at Gandaan, monks learn proper techniques on how to plant trees from ecology experts. Planting trees will serve to protect the dry soil of the Mongolian landscape from eroding as well as aid in maintaining essential nutrient cycles, thus making the land more fertile.

For example, the monks of Gandaan have pledged to protect Butaan Mountain, a sacred mountain just outside of Ulaanbaatar. Every year, they hold multiple ceremonies there that are important to the Mongolian Buddhist community. In order to reciprocate the blessings they receive from the spirits of Butaan Mountain, they plant trees and keep the ecosystem clean and

safe. Additionally, monks, as part of their duty, are also required to travel to their home in the countryside and help take care of the environment there.

One major project of Gandaan has been a collaboration with environmental organizations such as the Alliance of Religion and Conservation (ARC), the World Wildlife Fund (WWF), the World Bank, and several local groups such as the Orhon River Foundation. Combining their efforts with these groups culminated in August 2005 with the Northern Buddhist Conference on Ecology and Development held in Ulaanbaatar. This conference aimed to reinforce involvement of Mongolian Buddhists across the entire country in environmental activism. Topics addressed included water management, deforestation, mining, pollution, urban issues, biodiversity conservation, and pasture management.[55] The conference helped give rise to the revival of the *ovoo* establishing ceremony, make environmental education mandatory as part of the monk's training curriculum, and the saiga antelope protection program, which aims to spread awareness and management of one of today's fastest declining endangered species in the world.

Why would the monks be interested in doing all of this? According to one lama of Gandaan, the motivation to accomplish all of this lies in striving to achieve internal peace for oneself. According to him, helping others obtain peace helps oneself obtain peace. He believes that everything is part of the one god – so animals, plants, humans are all connected. It is only when this connection between all creation has peace that one can have peace within. Therefore, when a monk plants trees and protects the environment, he is at peace with the natural spirits and thus can meditate on them to obtain the serenity he seeks. The lama also went on to explain that everything that exists has a spirit. When humans cut down trees to sell lumber or hunt animals for profit, they are taking things that do not belong to them. Rather, they are stealing from the local *naga,* or mountain spirit, and thus invoking its wrath. That is why Buddhists must practice

55 Northern Buddhist Conference, p.6.

moderation, because the spirits will allow you to take only what is absolutely necessary. Wastefulness of any kind is not allowed, and interrupts the peace that should exist between the spirits and mankind. Clearly, such beliefs have positive implications for the environment.

3.2.2 Tashichoiling Monastery, Ulaanbaatar

Tashichoiling, a much smaller monastery than Gandaan, is also situated in Ulaanbaatar. This Red sect monastery has about 100 monks. Like other monasteries, it was forced to close during the Soviet Period but it reopened in 1990. Tashichoiling has "no set rule for protecting the environment," but has worked closely with ARC becoming involved with the revival of the *ovoo* creation ceremony. By doing this, they are attempting to fortify the traditional relationship between Mongolians and their environment. Once a year, they also hold ceremonies that ask practicing Buddhists to renew their vows to protect nature. This dedication is not only thought to appease the spirits, but also makes the consequences of harming the environment that much more terrible – which means there is a stronger motivation to follow through with the pledge. They have taken part in *ovoo* creations all over the country, including the Burkhan Khaldun Mountain in the Khentii *aimag* in northeast Mongolia, the "Golden" mountain (also called Altan Uul) in the south Gobi, and in the steppes to the north. The monks then enlist the local people to make sure the *naga* are kept satisfied and protected. Additionally, since 2003, monks of Tashichoiling plant 1000 trees every year in order to begin restoring the forests of Mongolia. And much like Gandaan, they do not do so at random – they research which and how many of each tree species should be in a specific region, based on life histories of the species and the environmental conditions.

One of the most progressive projects that the monks of Tashichoiling have taken on is compiling various books, in collaboration with the ARC, on how to protect local ecosystems. These books are then distributed all over Mongolia to the local people as a way of spreading Buddhist environmental ethics. The ultimate goal of these books is to make ideas of moderation of natural resources, avoiding pollution, and care for the environment commonplace among the general public.

A lama of Tashichoiling describes his drive to help nature in one word: *karma*. Basically, he said if a person gives bad *karma* to nature, than nature will give bad *karma* back to them. Bad *karma* is believed to accumulate and will ultimately prevent the seeker from obtaining the enlightenment he works for. Surprisingly, the lama then turned the conversation to talk about the problems that have been caused by the mining companies. He said habitats like the Oyo Tolgoi mountains and the Erdenet mountains have been destroyed to make way for mines. These mountains used to have *ovoos*, so now the *naga* of the holy mountains have been displaced. This has resulted in a cascade of environmental problems ranging from rivers drying up to increased dust storms. It is believed that these phenomena are the result of the *naga*'s wrath. This dramatic example of bad *karma* is something that monks of Tashichoiling want to avoid. Companies come to the monks of Tashichoiling before breaking ground and starting a new mining campaign in order to ask the monks the pray to the natural spirits and ask for a successful dig. However, the monks have no say in the choice of where the company mines at or the techniques the company can employ – so they really exhibit no influence here. It is interesting that the lama of Tashichoiling immediately turned to the principle of karma when he set out to explain the monastery's involvement in conservation. According to tradition, it is

Yellow sects that focus on avoiding bad *karma* more so than Red sects. And yet, the lama of the Yellow Gandan did not once mention *karma* in his answers while the Red lama focused on it.

3.2.3 Amarbayasgalant Monastery, Erdenet

Located in Northern Mongolia, Amarbayasgalant is comparatively a small monastery of around 60 monks. Much like Gandan and Tashichoiling, it was closed during the Soviet Period, reopening around 1990. Interestingly enough, Amarbayasgalant broke away from the rest of the Buddhist monasteries in Mongolia in 1994. This was the result of a falling out with the Dalai Lama after he advised them against worshiping their primary deity and protector, Dorjjugd. Today, the monastery is an independent of mainstream Mongolian Buddhism and is the only one that prohibits monks from drinking and marriage. It is considered closer to a Red Hat Sect monastery.

Unlike that seen near the two monasteries in Ulaanbaatar, the environment around Amarbayasgalant is much less affected by desertification and instead is surrounded by fertile land and forests. It is surrounded by mountain ranges, with many *ovoo* sites and a seemingly high biodiversity. Since the region itself doesn't seem to be experiencing environmental crisis, the monks of Amarbayasgalant have turned their focus to acts of maintenance and respect to the environment rather than efforts of restoration. This limits their environmental work to that of pollution clean-up and living the traditional lives of moderation that all Buddhist monks have.

The presence of numerous *ovoos* around the mountains near Amarbayasgalant indicate that the monks are probably working to satisfy the sacred *naga*. The monk I spoke to though was very reluctant to give information regarding their Buddhist principles that would give insight into what he felt is motivating them to protect nature. It could be that the trend of environmental

activism has not yet caught on at Amarbayasgalant, since the monastery has been an independent establishment from mainstream Mongolian Buddhism for 14 years. However, monks of the monastery took part in an environmental training program in 2003, so they have been educated on the subject. Maybe since it is at Gandan where this movement really started, Amarbayasgalant may be hesitant to take part in it. The other possibility is that because the region the monastery is located in still seems rather unaffected by climate change, the need has not arisen begin such work. Whatever the reason, Amarbayasgalant is not nearly as active in the deep ecology movement as Gandan or Tashichoiling.

4.0 THAILAND

The environment in Thailand has seen a lot of problems similar to those in India. The main difference between the two is that the Thai government has been actively working to conserve a variety of areas over the past 20 years. Literature expressing the needs for new environmental policies and action date starting around 1989. The current king of Thailand, Rama IX, is well known for being an environmentalist (studying environmental engineering in university), and the people of his nation try to follow in his example. All of this aside, there are still a number of concerns that remain to be resolved.

Like India, deforestation remains one of the largest ecological concerns of Thailand. The Royal Forestry Department (RFD) of the Thai government maintains a policy to aim at keeping approximately 40% of the land area of Thailand forested.[56] Accomplishing this is no easy feat, considering at the time this policy was put in place, the percentage of forested area was at 29%.[57] Recent years has seen the number of national parks grow, putting more forests under protections and dedicating more land to reforestry projects.[58] However, the methods of reforestry have been quite controversial. In order to obtain very quick results, the RFD initially focused their efforts on planting eucalyptus forests. This species of tree, although very quick growing and robust, is not very ecologically important. Rather, it is highly efficient at extracting all the water and

56 Phillip Hirsch and Larry Lohmann. 1989. "Contemporary Politics of Environment in Thailand." Asian Survey 29. p. 448.
57 Ibid.
58 National Park, Wildlife, and Plant Conservation Department of Thailand. Available online at www.dnp.go.th.

nutrients out of soil, making it a superior competitor with any other plant species that should naturally inhabit the area. Furthermore, the eucalyptus tree provides neither any sort of habitat for native animal species nor nutritional value for grazing animals.[59]

Deforestation, in turn, becomes linked to soil erosion. It was estimated at one point that more than one-fourth of all of Thailand's land area was subject to severe soil erosion. Agriculturally, this is a major concern. But also, this makes the environment much more susceptible to disturbance events. Mudslide events have become more frequent due to the lack of plant-life to stabilize soils. These events have profound effects on both surrounding ecosystems and the nearby villages.[60]

Many marine ecosystems are also facing threats of devastation. Coral reefs are becoming increasingly disturbed by recreational diving and other tourist activities. Coastal mangrove forests are also demolished and replaced by artificial beaches or beachside bungalows constructed by resort owners. This has had a profound effect on the ecosystems in Thailand. It is known that mangrove forests and reefs serve as buffers, protecting the shoreline from disturbance events by ocean waves. Indeed, they can absorb and mitigate great amounts of energy due to waves such that the shorelines are ultimately unaffected. However, large scale removals of these habitats have made shorelines susceptible to erosion and pollution. Additionally, many ecologists believe that it is because of the loss of coast mangrove forests that the effects of the tsunami in 2004 were so tragic.[61]

There are also a number of species found in Thailand that are on the endangered list. Years of poaching by hunters, habitat destruction, and food source contamination by pesticides

59 Hirsch and Lohmann, p.449

60 Ibid, p. 439

61 F. Dahdouh-Guebas. 2006. "Mangrove forests and tsunami protection." In : 2006 McGraw-Hill Yearbook of Science & Technology, McGraw-Hill Professional, New York, USA, pp. 187-191.

has affected a number of species. This includes the Malaysian sun bear, the Asiatic black bear, the Indochinese tiger, and a variety of species of birds, fish, and cats. The national symbol of Thailand, the Asian elephant, has been decimated to where current population estimates put it at less than 2,000 individuals. In addition to being poached for its ivory, young elephants are often captured to serve as tourist attractions or work animals.[62]

If one considers the capital city of Bangkok itself, it has a world of environmental concerns all to its own. Much of these problems are result of the incredibly fast rate the city has developed over the past few decades. Much like what was seen in Ulaanbataar, water supply and quality are a large concern. Bangkok is built on the delta plains of the Chao Phraya river, making it very close to sea level. Fast rates of development and population growth have led to a high demand of water supply that is hard for water companies to meet the needs of. This has resulting in tapping into the ground water supply underneath Bangkok, depleting the water table at a rate that is nearly one and a half times the safe amount.[63] Because of this, Bangkok is actually sinking closer and closer to sea level, at a rate that is as much as five centimeters per year in some regions.[64] Although the government in recent years has outlawed plumbing within the city limits of Bangkok from drawing up ground water, provincial areas directly outside the city borders are still allowed to draw from that very same water supply. As the city and surrounding environment sinks closer to sea level, it becomes more susceptible to flooding during the monsoon season. In addition to causing a lot of damage to man-made structures, flooding can destroy forests and other ecosystems. Flooding can also result in mixing saline waters with fresh water supplies. Additionally, rapid industrialization has caused a decline in

62 Jennifer Hile. 2002. "Activists Denounce Thailand's Elephant 'Crushing' Ritual." National Geographic. Available online at www.news.nationalgeographic.com

63 Dhira Phantumvanit and Winai Liengcharerernsit. 1989. "Coming to Terms with Bangkok's Environmental Problems." Environment and Urbanization 1, p. 32.

64 Ibid.

water quality of the Chao Phraya river and connecting canals. Factories produce a great amount of waste water that is dumped directly into freshwater supplies. Many houses and apartment complexes also drain water directly from sinks and such into these canals.

Air quality of Bangkok is also questionable, much like any major city. High motor vehicle traffic causes high amounts of exhaust emissions of carbon monoxide. Factories and power generation plants have caused a high concentration of sulfur dioxide and particulates in the air as well.[65]

4.1 RELIGIONS OF THAILAND AND ENVIRONMENTAL THEOLOGIES

4.1.1 Theravada Buddhism

Theravada Buddhism is by far the majority religion of Thailand, having both ties with the Thai government and the Thai national identity. However, there are certain aspects of Thai Buddhism that are slightly different than that of Sri Lanka, for instance. The historical folk religion of Thailand has had influence on modern Theravada Buddhism, incorporating elements of ancestor worship and the belief in spirits. This can manifest itself in a desire to protect ecosystems and animals in order to not to upset these spirits (not altogether dissimilar to the concept of *ovoos* in Mongolian Buddhism). There are also a number of actions and taboos that rural Buddhist monks abstain from that originated from Thai folklore. Thai society as a whole is extremely superstitious and Thais are very mindful to avoid upsetting the spirits.

65 Ibid, p.36

Furthermore – and I should note that this is a personal observation of mine – it seems that there is a very deep and profound admiration for monks in Thai culture, much more than for religious leaders in other cultures I visited. One possible explanation for this is the traditional practice that all Thai males are expected to undergo novice monk training for a period of time at some point in their life. This promotes a greater understanding between lay people and monks, allowing everyone a first-hand opportunity to realize the challenging lifestyle a monk assumes when he becomes ordained. Monks are addressed with the title *phra*, which in the Thai language is a title of deep respect implying a sort of royal and fatherly status. The reason why I feel that this is important to point out is that this indicates that monks in Thailand may have a greater societal influence than they do other cultures, which then has a greater potential to impact environmental awareness in the society.

4.1.2 Christianity

Christianity, although very far from being considered a religion of Thailand, will also be considered here due to one of the case studies I present below. The relationship between Christian theology and environmental ethics is one of contradiction and strain, as I touched upon briefly in the introduction. While the book of Genesis teaches that all of creation is the result of God and should be respected as such, there is also a clear sense of a hierarchy that places humans above all other life forms. Some scholars of deep ecology have said this has fueled the exploitation of natural resources, saying that Christians use the "mastery over nature" as validation for being able to use the environment carelessly.[66]

66 White, p. 156

The World Council of Churches, which met in 1990, made a response to this claim. They made a direct statement resisting this, instead saying:

> We will resist species extinction for human benefit; consumerism and harmful mass production; pollution of land, air and waters; all human activities which are now leading to probable rapid climate change; and the policies and plans which contribute to the disintegration of creation.[67]

Furthermore, the council has incorporated the Christian principle of confessions and repentance as a response to the environmental crisis. Indeed, they admit that humans have been careless with the exploitative manner they have used the environment. The time has come to repent for this treatment and work to fix it. Again returning to the idea of creation as a loving action of God, they said that while we humans are "special," we are only part of the overall big picture. Humans, since we have been created in God's image, should in turn act as "priests, stewards, and co-creators with God for the rest of creation" though instead we are often the destroyers.[68]

There have been a number of direct responses to White's original paper condemning Christianity as a primary cause of today's environmental crisis. However, Christian theology and environmental ethics are not exclusive of each other. In fact, there are three main models Christian eco-philosophy that should be considered: one of Christian stewardship, another of eco-justice, and the last of creation spirituality.[69] The first one, regarding stewardship, takes on using Biblical interpretation to present humans as the caretakers of the earth. The second one, referred to as eco-justice, takes on the viewpoint that helping the earth is really a way of helping other human beings. This concept manipulates the already established Christian ideals of helping the impoverished and showing that conserving the environment is a way of relieving poverty. The last one, creation spirituality, requires one to accept that all of creation is

67 Palmer and Finlay, p. 85.
68 Ibid, p. 86
69 Laurel Kearns. 1996. "Saving the Creation: Christian Environmentalism in the United States." Sociology of Religion 57, p. 59.

panentheistic, which means that God exists within everything. While this is more common in Eastern Orthodox denominations of Christianity, it demonstrates a need for humans to work to preserve the whole.[70]

4.2 CASE STUDIES IN THAILAND

4.2.1 Wat Phai Lom, Pathum Thani

Wat Phai Lom is a Buddhist temple located just outside of Bangkok, in the provincial town of Pathum Thani. It is an area noted for a variety of bird wildlife – having become a safe haven for a number of species of migratory birds from India. The temple itself is very old (although the monk I spoke with did not have an exact date for its construction). Although it is a very modest temple with a small number of practicing monks, the ecological impact the temple has is quite great. Among the birds that make the journey to Wat Phai Lom, there are species of kingfishers, ibis, pelicans, and most notably the extremely endangered Asian open-bill stork.

The Asian open-bill stork population has been monitored for a number of decades. In 1964, there was only an estimated 4,000 storks left in the world.[71] It seemed as though the open-bill was fated to go the direction of the Storm's stork, another species of bird that once resided in the area, having been chased out by poachers and habitat destruction. However, in 1970, the temple was officially declared a sanctuary – making bird hunting and tree-logging illegal.[72] Ten years following this, the open-bill population was recounted and estimated to be around 30,000 individuals. I was not able to find the details regarding the methodology of this count, so its

70 Ibid, pp. 56-57.
71 Martin Williams. 2008. "Openbill Storks in Thailand." Available online at www.drmartinwilliams.com
72 Ibid.

accuracy is not guaranteed. Even so, some observable increase in the population was noted. Such a large population increase has a number of ecological benefits for the open-bill population: it becomes less susceptible to disturbance events, less likely to be affected by habitat fragmentation, and able to reproduce at a faster rate. In addition, the growth of the open-bill population not only helps to restore the natural conditions of the Thai environment (allowing it to play a significant role in the food-web again), but also that of India's since it migrates between the two counties annually.

What is rather intriguing about this case is the passiveness that the Buddhists of Pathum Thani have adopted in their conservation methods. I asked a monk of Wat Phai Lom about why they monks are working to protect the storks. Oddly enough, his reply was that the temple "was here first" and that the open-bills happened to come later. It was only when local ecologists approached the temple head and told him that the open-bill is endangered that they declared it a sanctuary. The monk said that the stork is protected merely because the Buddhist faith and principles of ahimsa prevent them from harming the stork. In contrast to all of the other cases I present, this situation does not involve and active effort to seek out and solve an ecological problem; rather, it is by chance that the problem came to them. In response to this, they simply teach the local people that worship at the temple to respect and protect the birds as a sacred form of life.

It is impressive that such a passive form of conservation has seen such notoriety and success. However, perhaps this has greater implications for the potential motivation religions can offer to environmental activism. After all, the truth of the matter is that only a small fraction of people in the world will actively work to help the environment. It is the everyday choices and lifestyles that need to be amended to create a more sustainable relationship between humans and

nature. Here, we see that Buddhist principles and the direction of religious leaders have influenced laypeople to react in a pro-environment fashion to the presence of an endangered animal that by chance chose a temple as its breeding ground.

4.2.2 Wat Pha Luang Ta Bua, Kanchanaburi

Also known as the "Tiger Temple," Wat Pha Luang Ta Bua is probably one of the most famous and most visited temples in all of Thailand. The temple has become one of the biggest tourist attractions, attracting foreigners to trek from Bangkok to Kanchanaburi with promises of petting baby tigers. Price of admission is steep – although the temple claims all proceeds go directly towards feeding and caring for the number of tigers the temple has rescued.

The temple and monastery itself are very new, having been founded in 1995. Currently, the temple houses close to 20 Indochinese tigers, over half of which were born at the temple. Although 20 individuals does not seem like a significant number, when considering the estimated number of this species of tiger left is around 1500, the ecological impact these 20 individuals could have may be very great. However, the monks of the temple have no intention to release this generation of tigers into the wild. Most of them have spent their entire lives in captivity and do not have the capabilities of hunting for themselves. They instead say the next generation of tigers will be released onto a nature reserve (which the official Tiger Temple website says is still under construction).[73]

There is a bit of controversy surrounding the nature of Wat Pha Luang Ta Bua. Critics of the temple claim that the monks did not obtain the tigers as cubs that needed to be rescued after their mother was poached. Instead, there are rumors that they were purchased on the black

73 Tiger Temple, Thailand. 2003. Available online at www.tigertemple.org/Eng

market as means of developing a tourist attraction for profit. Furthermore, the monks have yet to start the development of this nature reserve, which critics say is because they never intend to move the tigers to a natural habitat, preferring instead to keep them more accessible to tourists.[74]

A monk of the Tiger Temple did not give any indication of this though. He said that it was out of respect for the interconnectedness of life and adherence to karma that the monks first decided to care for the abandoned tiger cubs. It would have been unjust and very uncharacteristic of a true Buddhist to turn away a helpless animal, and it is because of this that Wat Pha Luang Ta Bua began to conserve the tiger population. He said the scheme of marketing the temple as a sort of petting zoo was done purely to make sure the monks would have provisions to take proper care of the tigers. He claims that the monks see no profits and that any excess money goes toward a fund to start the nature reserve.

The true ecological effect this temple has hinges on the sincerity of their environmental activism. If what the monks are saying is true, then new generations of Indochinese tigers will be able to live safely on a nature reserve in future decades, potentially giving rise to a health population of tigers. Although current numbers are small, if these individuals have high reproductive values, they may be able to amplify population numbers exponentially. However, if what critics say is true, this temple serves as an example of how corruption can infiltrate religious motivation and render ideas of deep ecology virtually worthless.

4.2.3 Wat Huay Nam Phud, Nan

Located near a number of small villages and towns in the northern province of Nan, Wat Huay Nam Phud has gotten a lot of attention for its deep ecology work. Surrounded by forests

74 Tiger Temple August 2008 – Update. 2008. Available online at www.tigertemple.co.uk

that are the target of many different logging companies attempting to satisfy the high demand Bangkok has for natural resources, the province has experienced a large amount of deforestation in recent decades. This is the reason why Nan got the attention of environmentally-concerned monks that have since worked to conserve the forests. This is where the famous Buddhist tree ordination ceremonies were first started. The ritual is actually rather simple in design – a number of monks join together and wrap a saffron robe around a tree in the forest (typically a very large or significant one) along with placing an image of Buddha at the base of the tree. This is followed by the same series of chants and prayers that is carried out when a novice monk is ordained into the Buddhist community of higher monks (*sangha*). The ceremony is deeply symbolic. The monks give a sacred status to the tree and thus the entire forest is consecrated (this is then communicated to all the people living in the surrounding villages). The power of the ritual is in that villagers now see the tree not just as a resource meant for exploitation, but rather as part of the mystical oneness that life forms are believed to share. Additionally, every time a novice monk is ordained into the *sangha*, he is given a tree seedling, which he is responsible for planting and caring for.[75]

Monks also work to educate the local villagers why forest conservation is important. They emphasize the relationship between the abundance of trees, water supply, and food production along with Buddhist principles that express the interdependence of all of nature. Finally, monks and villagers also collaborate on projects to conserve the Nan River, which has experienced problems with pollution and desiccation. A popular solution has been to hold rituals and establish fish sanctuaries that protect the wildlife of these fragile freshwater ecosystems.[76]

75 Susan M. Darlington. 2000. "Rethinking Buddhism and Development: The Emergence of Environmentalist Monks in Thailand." Journal of Buddhist Ethics 7, p. 5.
76 Ibid, p. 6.

The monk I interviewed said that he personally lived under the example of the famous abbot who initially started the tree ordination ceremony. He said the rationale for the ordination rituals came from a desire to lessen the pain of the animals and plants of the forest. There are a number of people who would remove the trees for a quick income – and the monks want to put a stop to that. The image of the Buddha placed at the base of the tree commands reverence from devout Buddhists. For those less devout, he said that the concern of disturbing and angering the natural spirits of the forest is enough to deter them from damaging trees. There is a legend that states that after this famous abbot carried out the first tree ordination ceremony, there were four men that sneaked into the forest and cut down a few trees to sell them. These men apparently fell victim mysterious deaths not soon after. I asked the monk if there is any truth in this story, but I did not receive a definite answer.

This is an excellent example of how one religious leader can have the power to start an entire conservation movement. Since the original tree ordination ceremony in 1990, there have been thirty-nine forests consecrated and over one-hundred fish sanctuaries established.[77] The impact this movement has had on the environment should not be underestimated – the creation of that many protected areas of both forests and freshwater ecosystems provides a great amount of safe habitat for a large variety of wildlife. And the fact that there is now folklore surrounding the tree ordination ceremonies indicates to me that there will be longevity in the success of this project.

77 Ibid, p. 10.

4.2.4 Christ Church, Bangkok

As stated above, Christianity is not traditionally a part of Thai culture, by any stretch of the means. In fact, the community of the Christ Church of Bangkok, in addition to those of the many other Christian churches one finds in Thailand, is mainly composed of ex-pats and has very few local Thai people. However, one should not underestimate the resources available to such a small minority in this case – Christian efforts in Asia often have access to a large amount of funding from Western Church groups. It should be noted that helping the environment is not the Christ Church's primary concern. In fact, since it was first founded in 1993, it has been working instead to provide relief to the impoverished in the rural communities of Thailand. A number of their projects, including providing English lessons, music lessons, and other recreational activities for kids have nothing to do with the environment at all – instead trying to prevent children from "entering the worlds of drugs and prostitution," something the priest of Christ Church says is a "huge problem." But often, as a direct consequence of trying to improve the quality of life of these rural communities, their work overlaps with the field of environmental activism. There are three such projects I will discuss: one involving improving local water quality, one involving the production and use of "biogas," and the last incorporating a system of integrated agriculture.

The water quality project was first instituted in order to provide adequate drinking water to rural communities. The Church has educated local villages on how to monitor the quality of their freshwater sources, including providing equipment for how to test for various specific pollutants. When the quality has dropped below a level deemed safe for drinking, the Church and the local villages collaborate to contact the government and make sure measures are taken to lower the amount of industrial pollution and agricultural runoff. Although the main goal of this

project is to benefit humans, the impact it has on the freshwater ecosystems cannot be overlooked. "Biogas," as the Church refers to it as, involves recycling pig manure in a non-complex manner via fermentation, and using the fuels produced from it for cooking and heating. It is extremely efficient and not only provides a low-cost fuel to villagers, but in turn decreases the amount of wood that is burned for fuel. This then lowers the need for villagers to cut down trees, decreasing the amount of deforestation. Additionally, since pig manure is decomposed during the fermentation process, there is less risk of it polluting water sources. Integrated agriculture involves using a region of land for more than one purpose. There are two main ways the Church has approached this. In one instance, they encourage villages to plant fruit trees on already-deforested lands – which will lower the amount of soil erosion occurring in the area. Additionally, livestock is raised on these areas, feeding on the grass that naturally occurs there and then fertilizing the land. The other method is using a region of land both as a rice paddy and a fish nursery. Commercial populations of fish are raised during the rainy season and harvested at the beginning of the dry season in areas that would already be flooded, due to the high demand of rice as a staple food in the community. This reduces the need for the villagers to go out and disturb natural populations of fish, which have seen a great decline due to the high demand of commercial fishing.

When I asked the priest of the Church where his motivation for maintaining these projects lies, he quoted two sayings of Jesus from the Gospel of Matthew: "Therefore go and make disciples of all nations" (Matthew 28:19) and another which he interpreted as a need to help the poor, hungry, and sick (Matthew 25: 33-39). It is very clear then, that the theological motivation here is focused on helping humanity and spreading the word of God, not improving the environment – consistent with the "eco-justice" model I explained above. However, their

access to a large amount of funding from the global Christian community makes their projects extremely successful, so their environmental impact is fairly significant.

5.0 DISCUSSION

Now that each of the cases has been presented, there are a few comparisons I will make between them. I am choosing to relate cases based on similar ecological goals, cross-cultural implications, and the differences between the impacts a majority religious group can make compared to that of a minority religious group. I will start with two rather simple comparisons and then move onto one final slightly more complex one.

5.1 EFFORTS AT BIRD CONSERVATION

There are two temples that I visited that focused their environmental activism on working toward bird conservation. The first of these, Wat Phai Lom, is a Theravada Buddhist temple in Thailand, making it part of the majority religion. Almost 95% of Thais declare themselves a Theravada Buddhist.[78] The other, Lal Mandir of India, is a Jain temple and less than 1% of all Indians are Jain.[79] Therefore, my first point is that here we have an instance of a religious group that is part of the overwhelming majority in one culture compared to another religious group that makes up a very small fraction of another culture.

78 CIA Factbook: Thailand. 2009. Available online at www.cia.gov.
79 CIA Factbook: India.

At Lal Mandir, Jains have organized a bird hospital to care for the injured individuals that adherents *actively* go out and find in the crazy urban environment of Delhi. However, monks of Wat Phai Lom do not exhibit an active effort to protect the birds; instead, as the monk stated, the birds just decided to show up one day. It was merely their Buddhist principles that prevented the monks from harming or forcing the birds to relocate. It is intriguing because here we see an illustration of a passive effort being far more effective than an active effort. Jains at Lal Mandir are choosing to focus their efforts on saving ecologically insignificant individuals – mainly pigeons, which are members of a population so large, the small proportion actually affected by the Jains is negligible. Furthermore, they are actively disregarding the more endangered birds of prey, based on their extreme interpretation of *ahimsa*. On the other hand, the monks of Wat Phai Lom basically, by chance, encountered an extremely endangered species of bird on land that had already been consecrated and protected it just by their mere presence. Although Buddhists do not interpret *ahimsa* as strongly as Jains do, that is the principle that is also at work in Wat Phai Lom as well: the monks cannot harm the bird and they preach to the local villagers that they should also abstain from harming it.

How is it that the active efforts of one group can fall short in comparison to the passive efforts of another group? This could be a situation where the impact of a minority religion just cannot match up to that of a majority religion. Jain monks simply do not have the societal influence in India as Buddhist monks do in Thailand – this is undeniable. Thai monks at Wat Phai Lom, simply by teaching local villagers that these birds are a sacred form of life that should just be left untouched, create a safe haven that the Asian openbill stork can migrate to year after year. Within the sanctuary of the temple, the openbill stork population should be able recover and eventually develop to a more robust number. Jains of Lal Mandir, on the other hand, work

constantly and yet their efforts produce no desirable ecological effect, namely the protection of threatened species.

Yet, I do not think this situation necessarily provides the proof necessary to make the claim that a majority religion is more effective simply because it is the majority. One may argue that the differences lie in the theologies of the religions themselves. Buddhists, with a more moderate "version" of *ahimsa*, are also more accepting of all forms of life and thus protect and conserve them indiscriminately. Jains, in contrast, pick and choose only organisms that emulate their ideal version of *ahimsa*. Additionally, one could say that it is purely chance that creates the difference here. Chance brought the openbill storks to Wat Phai Lom. Chance has not brought a more ecologically significant population to the attention of the Jains at Lal Mandir (at least not one that they can, by principle, protect).

5.2 PHILANTHROPY, WITH A LITTLE ENVIRONMENTALISM ON THE SIDE

Two of the most successful cases I studied did not even have a primary intention to improve the environment – something that is extremely interesting. At Belur Math in India and Christ Church in Thailand, we find that the religious groups are working to improve the living conditions of poor rural communities. As a positive consequence of these actions, they are improving the environment that these communities live in. The projects of both religious groups not only improve the efficiency of agriculture and raising livestock, but also provide alternate sources of fuel, which reduces deforestation. Additionally, both allow the natural restoration of freshwater ecosystems to take place by reducing the strain caused by excessive overfishing. Despite the fact that at first glance, Hinduism and Christianity seem to be vastly different

religions, both groups cite their motivation for this philanthropic work in very similar ways: a duty to help relieve the poor. In Hinduism, this duty comes in the form of principle of *dharma* and the idea that by fulfilling one's duty to serve the poor, one is bettering their *karma* and helping oneself spiritually. This is almost identical to the explanation given to me by the priest of Christ Church, except in terms applicable to Christian theology. He explained that according to the Gospel of Matthew, Jesus preached that it is the duty of a Christian to help the poor, sick, and hungry. A direct implication of this command is that this duty of a Christian is a way of spiritual practice, which will make one closer to the way of Christ.

Even though Christianity is a very small minority religion in Thailand and Hinduism is an overwhelming majority in India, their true impact does not seem to be very different. It seems that philanthropic projects of this kind focus on specific communities in specific regions and work to improve that environment only. Furthermore, Christianity is an exception among most minority religions in that it is usually not constrained by a limited amount of funding, resources, and adherents. This is because Christianity has an established wealthy global community that is more than willing to provide for the less established communities in Asia (as well as Africa and similar areas) with funding necessary to "spread the word of God." This provision takes the form of money as well as sending members across the world to take part in the service work.

5.3 A VARIETY OF APPROACHES TO FOREST CONSERVATION

During my travels, I encountered a number of temples and monasteries that focus their efforts on reforestry projects or those preventing further deforestation. In order to systematically set them up for comparison, here is a list of those involved with forest conservation:

1. Gandaan Monastery, Mongolia – Yellow Tibetan Buddhist, Majority
2. Tashichoiling Monastery, Mongolia – Red Tibetan Buddhist, Minority
3. Shri Jagannath Temple, India – Hindu, Majority
4. Burmese Vihara, India – Theravada Buddhist, Minority
5. Wat Huay Nam Phud, Thailand – Theravada Buddhist, Majority

Those monasteries of Mongolia are extremely innovative in their methods of reforestation. The fact that they actually take the time to research which species of tree belongs where, the abundance of individuals that is needed to properly restore an area, and the capacity an area actually has for sustaining a tree population all indicates a very strong dedication to helping the ecosystem. Gandaan, being not only a part of the majority religion in Mongolia, but also one of the largest Tibetan Buddhist training centers in the world, really seems to have initiated the deep ecology movement in Mongolia. It was Gandaan that started the collaborations with ARC, the World Wildlife Fund, and World Bank, which lead to projects to combat desertification and educate the general public on environmental conservation. It seems that only after Gandaan established itself as an effective example of an alliance between Buddhism and ecology that Tashichoiling joined the movement. Both monasteries have been very successful in their projects, although I have my doubts that Tashichoiling would have ever become environmentally active if the more influential Gandaan monastery had not started the movement first. Furthermore, their primary sources of motivation seem to be different – the lama of Gandaan stressed a more individualistic motivation of trying to reach internal peace; whereas the lama of Tashichoiling emphasized a more holistic motivation worrying about upsetting the *karma* of nature.

The lama of Tashichoiling also discussed the *ovoo* creation ceremony – the ritual done to strengthen the local people's connection to nature and commitment for protecting it. This process is incredibly similar to the tree ordination ceremony practices at Wat Huay Nam Phud. Both involve a symbolic consecration (or re-consecration, in the case of Tashichoiling, because they already believe the locations to be sacred), both involve a mystical communication with the natural spirits, and both use an element of fear to motivate the local people to keep their promise to protect the land. Indeed, the monks I spoke to at either location mentioned that the spirits would be even more angered by the exploitation or mistreatment of the ecosystems following the ritual. There could be several explanations for this similarity. It could simply be that both Thai Buddhism and Mongolian Buddhism are very much influenced by superstition and traditional mystical folk religions. But I believe that the tree ordination ceremony, having existed longer than the *ovoo* creation ceremony and being rather famous in the Buddhist deep ecology movement, may have served as the inspiration for the *ovoo* creation ceremony. It seems logical that Mongolian monks just adapted the ceremony to have deeper significance in the cultural context of Mongolia.

Considering the examples of the Shri Jagannath Temple and the Burmese Vihara, we see two situations where it is the religious history and cultural value of the region that serves as the motivation. This makes rational sense: India is the motherland, serving as the birthplace of both Buddhism and the Hinduism (in all its various forms). Therefore, both of these temples equate preserving the environment, whether it is that of Puri or of Bodh-Gaya, with preserving the history and integrity of their religious beliefs and practices. The Shri Jagannath Temple is a very famous and culturally significant temple and thus, has been able to create quite a positive impact on the environment. By contrast, the Burmese Vihara has a very small community of monks and

is already part of a very small minority religion in proportion to other faiths in India. Consequently, the actual potential they have for improving the environmental situation is dependent on their ability to collaborate with other organizations, in order to increase their numbers and their resources.

Whereas the two cases seen in India rely on the already established religious significance of the region to promote conservation, the three cases in Mongolia and Thailand actually attempt to create a similar significance to achieve the same result. These cases regarding forest conservation provide illustrations of how a majority religion is in more of a position to generate a large environmental impact than a minority religion is. However, that should not discount the minority religions entirely. Tashichoiling, although it did not begin the deep ecology movement in Mongolia, is credited for starting the *ovoo* creation ceremonies, which have been extremely successful in appealing to the religiosity and superstitions of local people. And through collaboration with the ARC, the monks of Tashichoiling have successfully increased environmental awareness through publications. Furthermore, the monks of the Burmese Vihara could potentially increase the environmental impact they could create if they are able to get support from the global Buddhist network – something that should not be considered that far-fetched, since Bodh-Gaya is extremely significant to all practicing Buddhists.

5.4 CONCLUDING REMARKS

My interest in this project initially started as a paper topic for my Religion in India class during my junior year. I researched the theories of deep ecology, investigated the environmental theologies of a few different religions, and read a few news articles looking at how these

theologies shaped real projects. Based on that, I wrote a proposal and got funding for this study. In the course of it, I discovered that it is two completely different things to read up on the theories of this field and then actually going out, observe the practices in the field, and most importantly, *talk* to relevant religious leaders involved and hear what they have to say on these issues. Especially since I have never particularly been a religious person myself, I was really fascinated how one's faith can inspire people to do these incredible things. Anyone who has ever taken a European history class has been educated about how religion can change history; and yet, seeing how religion can influence these everyday lifestyle changes and promote environmental activism left a greater impression on me than anything read in the classroom.

I should also note at this point that the same applies for the field of ecology in regards to the environmental crisis. Again, learning about deforestation, desertification, and pollution in the classroom is absolutely nothing to seeing the environmental destruction first hand. I included the example of how polluted the Ganges River is when I discussed the environmental problems of India because I had been so struck by it when I visited Varanasi. One part of the river would be subject to ceremonial cremations, another to waste disposal, and yet another (just literally a few meters downstream) would have people washing dishes and clothes or bathing.

This project has been an important learning experience, which has only reinforced my belief in the potential of deep ecology, even more so now than when I started this study. Religion has always served as a foundation of ethics for each individual adherent. Personally, I must admit that being raised in a Roman Catholic family and attending years of Sunday school has influenced by idea of ethics even though I no longer attend church. If religious leaders interpret their teachings in light of a proper relationship between humanity and the environment, there is a great capability of sound environmental ethics to become widespread. A lot of the

critics of the deep ecology movement claim that these ideas are just another result of the romanticized views the West has about Asian religions.[80] However, I think that those particular scholars are misinterpreting the point. I do not believe these studies presume to make simplistic statements such as "all practicing Hindus are environmentally aware simply because they believe in panentheism" or "all Buddhists practice *ahimsa* and therefore never harm the environment." Rather, I see that deep ecology scholars take specific ideas and/or teachings from religions in question and to help the members of these religions make the connection between their own spirituality and an obligation to respect and take care of the environment. Therefore, the ultimate goal of this movement is to help people of all different religions realize that working to solve current ecological problems and expressing their religiosity are, in some ways, one and the same.

Thus, Deep Ecology provides a new source of motivation for environmental ethics and as history has shown time and time again, the power of religious motivation can accomplish incredible things. In the examples I provide in India, Thailand, and Mongolia, deep ecology's potential in providing solutions to environmental problems seems to be quite vast. It would be naïve to say that the power of these religions' messages will single-handedly solve deforestation and other ecological issues of these countries. Yet, it would also be unrealistic to deny the hope that these religious movements offer when taking into consideration the actions that have already been taken.

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