

COMPASSION AND CONSERVATION

The first meeting of Bhutanese monks and nuns to discuss how to protect the environment

Thimphu, Bhutan, September 5-6, 2011



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1.0 EXECUTIVE SUMMARY

The first “Compassion and Conservation” conference in Bhutan could not have gone better. Sixty-three high lamas, monks and nuns from throughout the country gathered in Thimphu, by invitation from Bhutan’s Dratshang Lhentshog, the Commission for Monastic Affairs in Bhutan.

The event was funded by Norway’s Royal Ministry of Foreign Affairs (Grant number 10.0369) and The Tributary Fund. It was co-organised by The Tributary Fund, the Dratshang Lhentshog and the Alliance of Religions and Conservation.

Some 55 monks and 8 nuns attended this conference at Hotel Migmar in Thimphu, September 5 and 6, 2011. Nineteen of 20 Nam Netens (the representatives of the Chief Abbot of the Central Monastic Body from a particular district) from Bhutan’s 20 provinces attended the conference. The Chief Abbot of the Dratshang is the religious head of the country. In addition the chief secretary of the religious department not only gave a keynote speech, but also listened the next day to all participants’ thoughts and conclusions after group sessions.

On Day One participants heard a set of presentations from Bhutan’s conservation biologists and resources specialists, as well as from Victoria Finlay ARC (on Long-Term Environmental Plans) and Susan Higgins of the Tributary Fund (on Science Tool-Kits for Monastic Leaders). On Day Two, participants broke into three discussion groups where they arrived at a set of practical project ideas for monastic engagement in conservation.

This was the first meeting of its kind and it received thorough press coverage in *Kuensel* (the government newspaper, in which it received a front page lead story, a picture story and the lead op-ed column over different days) and the *Bhutan Times* (a private newspaper). Bhutan’s only national television news service, the *Bhutan Broadcasting Service* (BBS), also covered the conference.

Some of the key issues discussed were: green cremations; flower gardens; recycling; a better curriculum on nature; wildlife protection (and sharing of knowledge); writing educational books that really engage children; monks holding workshops on why organic/low pesticide agriculture is better for the earth, for health and for karma; using the emblem of the Old Man of Long Life to demonstrate how the environment is closely related to Buddhism.

This was an astonishingly successful meeting – there was a genuine sense of excitement and energy from all participants. We intend to raise the funds to hold another meeting in 18 months time which builds on that energy, expressed both by monastic body and government, reports on what has been done in monasteries since the first meeting, gives space for the creation of a new and relevant theology by Bhutan’s leading religious thinkers, and moves the issues forward.

To engage with the Dratshang Lhentshog, The Tributary Fund has been asked to raise \$25,000 to support an eco-toilet and shower block at the underfunded Gorina monastic school in the hills above Paro. This money needs to be raised before the program can proceed further in Bhutan.

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2.0 THE CONFERENCE

Some 55 monks and 8 nuns¹ (total 63), most representing Bhutan's monastic body (dratshang), attended this conference at Hotel Migmar in Thimphu, September 5 and 6, 2011. Nineteen of 20 chief abbots from Bhutan's 20 provinces attended. One of the eight nuns attending represented Kuenga Rabten, which has a strong environmental program (see below). Five of the monks represented private monasteries: Gangtey, Nimalung, Tharpaling, Namgang Choling and Pema Choling; five nuns were from private monasteries—three from Tang nunnery (in Bumthang), two from Kuenga Rabta (Tongsa). Please see Appendix for agenda details and participant list.

On Day One they heard a set of presentations from Bhutan's conservation biologists and resource specialists, as well as from Susan Higgins of the Tributary Fund (on Science Tool-Kits for Monastic Leaders) and Victoria Finlay of the Alliance of Religions and Conservation (on Long-Term Environmental Plans). On Day Two, participants broke into three discussion groups where they arrived at a set of project ideas for monastic engagement in conservation. This was the first meeting of its kind and it received thorough press coverage in *Kuensel* (the government newspaper) and the *Bhutan Times* (a private newspaper). Bhutan's only national television news service, *Bhutan Broadcasting Service* (BBS), also covered the conference.

Aims

The intentions of this workshop were to:

- Provide monastic leaders with information about promising conservation programs in Bhutan,
- Create dialogue around the connections between Buddhist teachings and conservation ethics,
- Create a forum for bridging ideas between Bhutan's conservation biologists, and head lamas from regions where scientific research is underway, and

¹ Seventy-seven were invited, but some could not attend because of rituals at their own monasteries or because of flooded roads. Some principals were still at their summer retreats, meaning they could not leave their monasteries.

- Develop a set of agreed-upon next steps for initiating conservation programs and plans at monasteries.

The principal of Tango monastic college (the only monastic school in the country that offers the equivalent to a PhD for monks) expressed succinctly one of his intentions of sending a monk to the conference: “I have instructed the teacher I am sending to your meeting. Whatever he learns, he will repeat it here.”

The purpose of the conference from the Dratshang perspective was about “sensitising the senior monks, who are the decision-makers” (Lopen Tashi Galay, the Dratshang’s meeting coordinator).

3.0 SUMMARY OF THE CURRENT ENVIRONMENTAL SITUATION

3.1 Statistics

- Bhutan is 28,000 km sq with a population of 700,000.
- 79% of people live in rural areas practice subsistence farming and cattle rearing.
- 51% of land is held under the Protected Areas system – out of which about 10 percent comprise biological corridors. These provide free movement for the wildlife between protected areas. The country is developing a system of corridors for animals to migrate. The natural environment has been preserved for centuries and this relationship has been enforced within moral, cultural and ecological borders.
- 80.89 percent of the country is under forest cover,
- Bhutan boasts 5,603 species of vascular plants, 369 orchids, 46 rhododendrons, and more than 90 species of mushrooms including matsutake. There are more than 300 species of medicinal and aromatic plants, including 105 endemic. Around 200 species, 27 globally threatened.
- There are more than 770 species of birds and more than 200 mammals, including 14 globally threatened, 10 restricted range species and on the red list the white-bellied heron is critically endangered.
- 15 reptiles and 3 amphibians, 800-900 butterflies, 100 species of fish.

3.1 Notes on Bhutan’s ecology

In Bhutan it is recognized that “everyone wants to achieve happiness”, and one of the pillars of Gross National Happiness (GNH) is conservation of the environment (along with preservation of culture, economic growth and good governance). There is also a strong sense that Bhutan’s environment is relatively pristine. It is a peaceful country, religion is valued and prominent, and there are vast tracts of ancient forests. But there is also pressure to develop (road construction, electricity, tourism, building homes and hotels, two more airports opening in the next few years) – and development and westernization are happening much faster than the popular outside image of Bhutan suggests. Despite that, many efforts and trends are at play:

- Article 5 of Bhutan’s 2007 Constitution has explicit provisions to maintain 60 percent forest cover at all times. Currently there is 72.5 percent forest cover including scrub.
- Bhutan has declared to remain carbon neutral.
- One of Bhutan’s “exports” is green electricity; another is carbon. Due to its forest cover, this country gives back to the global carbon deficit.

- All forests are government owned and the idea is to give the forests back to the people, so logging is controlled. (Nawang Norbu)
- There are several rare species including black-necked cranes, tigers in the south, snow leopards in the north.
- “What we want is a young Bhutanese graduate student to spend three to four years monitoring snow leopards” (on which there is no baseline data). – Nawang Norbu.² The Max Planck institute has promised sophisticated electric “axilerometer” collars.
- There is an issue of yak herding nomadic families (particularly in the north) beginning to give up herding. Though not yet fully assessed, this will have an impact on the ecology of high plateaus (National Environment Commission).
- Climate Change affects Bhutan, like many other developing countries in the world. Some of the adverse impacts will be increased Glacial Lake Outburst Floods (GLOF), landslides and flash floods. GLOF is caused by glacial melt, which increases lake levels and eventually leads to flooding in the valleys below. In 1994, a lake in northern Bhutan (Lugge Tsho) flooded areas in Punakha and Wangduephodrang. The flood damaged property and 22 people died. Studies shown that there are 2,674 glacial lakes in Bhutan, out of which 25 glacial lakes are at a high risk for GLOFs. Thorthormi Lake in Lunana is one such high-risk lake. Various steps have been taken to address this looming threat such as installing early warning systems in river basins, artificial lowering of glacier lake levels, implementation of hazard zonation plans along the Punakha River and assessing GLOF threats for hydropower projects.

3.2 What the Dratshang is doing already, and why

The teachings of the Buddha are to: do no evil work, accumulate virtue, tame your mind, and remember that these are the teachings of Buddha. “Everything is inside these four lines,” said the principal (Lopen Gyep Tshering) of the Lekshey Jungney Shedra (school) located in Punakha, and a model for other monastic schools. “The environment is in these lines, and everything else.”

In addition, much of modern-day Buddhism in Bhutan stems from Bon (shamanistic tradition) where there is believed to be a god in every stone, tree, river and mountain. “Deep in the forest there are places that you are not supposed to touch because they are sacred.”

Other observations:

- Many monasteries have vegetarian kitchens and they promote the sacred days of the month as vegetarian – the first, eighth and fifteenth days of each month.
- In the Lekshey Jungney Shedra a college for monks at Punakha, all the cleaning is done by rotation. Each monk (including the principal) is assigned to clean the communal toilet once a week. They all cut vegetables in the kitchen. And although most are not by choice vegetarian, while they are at the school they eat only vegetables and quantities are carefully measured: “We do not waste even one piece of potato.” They use electric cookers that were provided by the Bhutan Trust Fund;

² A candidate has since been found from Bhutan’s Ministry of Agriculture and is hoping to conduct a PhD at Oxford University on snow leopards.

this conserves wood. And they engage in self-study outside most of the year, in a woodland glade where each has a chair and lectern, because Buddha achieved enlightenment beneath a tree. “We do not advise them why: through the scriptures they will understand.” “We teach protection of the earth and we hope that when they leave they will be experts on this. We learn how to hear, to listen and to eat.”

- At Tango Shedra there is a debate for 15 minutes every Saturday to focus on the relationship between the environment and Buddhism. “When students graduate from here they are posted in schools all over the country in high positions . . . They are the carriers of some very powerful words.”
- Gangteng Goemba is conducting programs on conservation teachings in the community and also working on prayer flags.
- Dechen Phodrang Monastery (which we visited day one) was previously in a terrible condition. There were just two taps for two or three hundred monks and just one toilet block meaning that many used the bushes. Four in five of the young monks had lice, and when their heads were shaved the scarring could be seen from impetigo and other painful scabbing. A team of doctors visited there and the Royal Society for Protection of Nature (RSPN) was given responsibility to look after the whole environment. They found it was unsanitary--even the paintings were filmy because of all the firewood smoke used for cooking. The cooks had sooty hands and they often did not wash them before cooking. With the endorsement of the Crown Prince, now the King of Bhutan, and government funding for the infrastructure, they brought in a new toilet block and water supply and, most importantly, new practices and awareness education through RSPN. Now, the monks and laypeople wash their hands regularly (and understand why). RSPN also developed a manual for monks to develop flower gardens (Ugyen Lhundup, RSPN).

4.0 KEY CONCERNS OF MONASTIC BODY AND OTHERS

4.1 Pre-Conference Surveys

Fifty participants completed a pre-conference survey (see Appendix 7); 80 percent of these were senior level monks such as Lam Netens (the representative of the Chief Abbot of the Central Monastic Body to a particular district), principals (in charge of anywhere from 23 to 325 students), secretaries and teachers. The remaining respondents were students.

Most rated themselves to have a medium level of environmental knowledge. There are various environmental programs implemented in the monastic schools, including reforestation, clean-up days, gardening, protecting/cleaning water bodies nearby the schools, carrying out lessons on the environment (four elements of earth: water, earth, fire and wind), replacing firewood with electricity, enforcing proper waste management, making religious offerings to environmentally degraded areas like the landslide prone areas, proper sanitation and participating in the conservation of keystone species such as the black necked cranes.

Regarding the differences from past to present in Bhutan’s state of the environment, some respondents said that there were no differences. Others felt that the environment has improved due to awareness and establishment of new environmental organizations. This is also attributed to sound environmental policies (the middle path), where unsustainable

practices are banned. However, most said that despite Bhutan's good environmental condition, there would be challenges due to development and increase in population. Glacial melt is one big change. Some felt Bhutan is in a better state than other countries but, compared to the past, the environment has indeed deteriorated. Bhutan might have about 70 percent forest cover now, but compared to the past this number has fallen.

Some of the environmental problems highlighted were: poor soil quality, inadequate and improper waste management (too much litter, especially of non-degradable items such as plastics), too much firewood consumption (there is a need to replace it with electricity), uncontrollable forest fires, lack of sanitation (proper maintenance of toilets and washrooms, kitchens), climate change threats such as GLOFS, development activities such as road construction, air pollution, mining, water shortage and overgrazing by livestock thereby requiring fences.

Some of the barriers to conducting this work were seen as lack of environmental knowledge and low budgets in schools for conservation workshops and activities. This was the first time for about 90 percent of the participants to attend a conservation-based workshop. Some participants also said that there was no collaboration between environmental organizations and monastic schools in Bhutan.

All were very grateful for the conference and inspired to share what they learned. They were motivated to adopt environmentally friendly projects in their schools such as replacing firewood with electricity, collaborating with more environmental organizations such as NEC (National Environment Commission) and introducing an environmental curriculum in their schools. They regularly teach and mentor from a hundred to a few thousand annually.

4.2 Interviews

1. Several expressed the concern beforehand that "when the workshop is finished they will forget everything."
2. More information is needed (e.g., is it better to burn or dump waste)?
3. Question from one monk: It is peaceful in our country, and our environment is pristine and religion is quite strong and this is why many tourists are coming to our country. But they bring waste with them and who is managing them? It is the tourist contractors and not the ordinary people who benefit. And again, for road construction the government is giving money to contractors and then environment is destroyed. Is there any scheme to make them pay for the environment and is there an organization that makes them accountable. Also, in the monasteries we are on top of the hills and in the valleys and we can see the animals preying on each other. We see the tiger preying on the deer--there a plan to separate these animals?
4. There is a concern, expressed by WWF, that collaring snow leopards might simply allow sophisticated poachers to trap them more easily. When a black-necked crane was captured for tagging, the bird died.

5.0 LONGTERM PLAN IDEAS TO TAKE INTO THE FUTURE

During the conference, the attendees broke into three facilitated discussion groups to discuss three distinct questions:

1. Ways monks/nuns can mentor their communities in conservation actions through leadership
2. Steps for setting up “Green Monasteries” (set up recycling, composting, energy efficiency, gardens, waste management, conservation brochures and signage, etc.)
3. Methods to enhance coordination among religious institutions, media, agencies, scientific researchers and conservation organizations.

Outcomes of these discussions are summarized in Appendix 2, and also presented below in accordance with the seven categories ARC suggests religious leaders explore when developing a long term plan to protect the environment. These suggestions also support the idea of developing the Science Toolkits for Monasteries concept presented by The Tributary Fund (especially recommendations in Sections 5.2, 5.3 and 5.4, below).

5.1 Assets

- Recycling in Monasteries. If it continues now as it has been going so far, waste generation is anticipated to go from 51 tons per day in 2010 to 130 tons in 2030. Metal waste is decreasing in Bhutan but plastic waste is increasing (RSPN). Most waste now is organic (49 percent of 51 tons a day) and 25 percent is paper. Plastics are 13.7 percent, glass is 13.7 percent, metal is 0.5 percent, and textiles are 3 percent. This could potentially be recycled as bio-fuel and compost. There is very little recycling being done right now, partly because the government does not collect it – but the monastic body could make requests for this in every province of the country.
- Flower garden and kitchen garden program, including educating monks on how to plant and tend gardens. RSPN has produced an initial booklet on this.
- Many monasteries are in watershed areas. “If there are no trees in the watersheds then we will plant trees.”
- Where it can be done, monasteries will build greenhouses to be more self-sufficient, and pollinator gardens to improve habitat diversity.

5.2 Education/Young People

- Emphasis on a better curriculum on nature to introduce into monastic school. Particular need for a book on the environment. “If we could publish it then we can teach about this.”
- Scientific bodies providing good research on biodiversity for monastic schools to pass on to their pupils.
- If the people say they want to use chemical fertilizers, then the monks will instruct them on how it is safer and more Buddhist to use organic fertilizers. “The productivity is high but the chemicals are not helpful for health.”
- Monks doing self-study in natural surroundings
- Monks publishing a book about the Buddha’s teachings/Guru Rinpoche stories, etc., specifically on the environment, drawing out from the 100 stories about Buddha (Todje Passa Tishe)
- A book for children “showing that there is such a thing as a snow leopard and that it is magical”.

- Debating the environment at monastic college (The Tango Shedra does this for 15 minutes every Saturday) but this could be extended to everywhere.
- One curious element of Bhutan, which from the outside appears to be the most Buddhist country, is that Buddhism is not taught in public schools, only to young monks or nuns in monastic schools. “We learn about Buddhism historically, but we don’t really learn what we should believe,” said one Bhutanese woman. “I should like to learn more”. One idea, which did not come up in conference, is that Bhutanese public schools could add Buddhism/Religious studies to its standard curriculum, and that part of this could be to explain the links between Buddhism and Nature.
- “A lot of the problem with the environment is because of ignorance. Anger and attachment and greed are because of ignorance. Only education is the medicine for ignorance” (Punakha Shedra)
- Teaching the “3 Rs – Reduce, Reuse and Recycle” of waste. Reducing is about being satisfied with what you have.

5.3 Theological wisdom and prayer

5.3.1 Need for a theology

- It was proposed to use the Tshering Dukhar (Old Man of Long Life thangka painting) to show how the environment is related to Buddhism.
- Several monks said they wish they had a week to compile from religious texts what are the important things said in ancient days and also by the various tulkus (reincarnate lamas) and lopens (monk teachers).
- In one text Buddha said we should not destroy saplings, in another he said we should not defecate in open spaces. These texts need to be collected together, referenced, and used to create a specifically Bhutanese Buddhist theology of nature.
- The teaching of Buddhism is that we have the words “I” and “mine,” yet when we go and look for “I” and “mine” we cannot say what is their weight, or their color or their shape. I and mine do not exist, everything is impermanent, and everything is empty.”
- There is a need for a theological approach. After all, if tigers eat deer, and tigers are sentient beings and deer are sentient beings, why should we protect the tigers more than the deer?
- There was an urge to introduce the idea of the outer environment of earth, water, fire and wind and the inner environment of people, animals, birds and species. “Our role is to make both happy”.
- “The core teachings of Buddhism are very complicated and people might not think it was interesting. But the environment is more obvious. When they combine the teachings of Buddhism with the teachings of the environment, then they will perhaps make Buddhism more relevant” (Principal of Trango)

5.3.2 Consulting on the sacred implications of development programs

- “Many people in Bhutan are more obedient to monks than to government officials.”
- There is a problem that monks have identified in Bhutan. “Many projects, particularly hydroelectric, are being conducted as if there is no religion in the country. Yet we consider that there are many deities presiding in each area, and many of them are very sacred mountains and rivers. Solution: to get permission from your local monastery before authorizing a new project” (Wangduephodrang, Lam

Neten). Whenever any project with any impact on the environment is initiated, monks should be involved. “And if they are not invited to do a ritual or a consultation, then they should insist they are invited.”

5.3.3 Other wisdom-based outreach

- “From the Buddhist point of view and from monastic bodies we will try to promote the environment to people in the surrounding areas.” Wangdue Lam Neten
- “When a child is born, monks do pujas. When a person dies, monks do pujas. Perhaps we could do more in the middle.
- There is a strong tradition of treasure hunting in Bhutanese Buddhism in order to associate the “terma” and “terton” teachings with the treasures of nature. Ecological problems include soil degradation and erosion, and a suggestion is that the monks see the minerals within the soil as terma, or sacred treasure, and do rituals to protect them.
- Suggestion that protecting the environment should be shown as a means to achieve Buddhist ways.

5.4 Lifestyles

- Green cremation – using electricity (which in Bhutan comes from hydroelectric) rather than burning a truckload of logs. “Instead of wood we will advocate using only electricity for cremation”.
- Stone baths are the traditional form of bathing in Bhutan during winter. These use a lot of wood to heat the stones (which then heat the baths). Perhaps an assessment could be made of the efficiency of this.
- Changing the 108 Mani Flags at funerals (where the poles are burned) to bamboo, or make them from steel and recycling them rather than burning. For a tree to grow to the size of a prayer flag takes 30 years: we need to plan this cutting down three decades in advance.
- Introducing electric cookers at monasteries to reduce the use of firewood (replaced by “clean” electricity from hydroelectric power stations). It is cheaper, cleaner and more ecological.
- Other lifestyle changes that benefit the environment are using tin roofs (because of the damp, traditional wooden tiles are replaced every three years, otherwise they rot). Perhaps the monks could promote this.
- Plastic bottles are used a great deal throughout Bhutan. However there is a water solution called SODIS, treating water using sunlight (RSPN). Use one plastic bottle over and over (1. wash the water bottle well the first time you use it; 2. fill the bottle with tap water and close the lid well; 3. Leave on a roof in the sunshine for 6 hours; 4. Drink). The King of Bhutan initiated the project when he was the Crown Prince.
- The sacred days of the month can be explained to more people in the secular community as being vegetarian – the first, eighth and fifteenth days.
- It is traditional practice to burn grass to regenerate it, but this leads to pollution. Can the monks assist in informing people of this? (NEC)
- There is a sense that what is needed in Bhutan is a civic sense. “We see land cruisers driving by and people throwing rubbish from the windows – people do not take responsibility”.
- Monastic support of a “health is in your hand” program of sanitation and nutrition.

- Monks will organize a regular clean-up campaign in every area. In many areas this is already being done.
- It was suggested by WWF that monks look for a more local eco-alternative for their butter lamps instead of Indian palm oil, which is being used increasingly.
- Suggested by WWF that people in Tibet, wearing traditional dress, still often wear rare pelts as the lining. This does not happen so much in Bhutan, perhaps because there is such a long tradition of wonderful, delicate weaving, so there is something special about the linings without animals having to die. Perhaps an NGO like WWF could run a program to send top weavers to Tibet.

5.5 Media and Advocacy

- Publish the Bhutanese version of “Mongolian Buddhists Protecting Nature” as a useful tool for governmental organisations and NGOs wanting to engage with the sangha, and also as a booklet for fundraising for programs linking the sangha with environmental protection foundations.
- “We will write poems about nature and Buddhism and publish them in every paper.”
- There was a strong awareness of the opportunity to advocate for the environment during rituals, festivals and blessings and religious discourse.
- Posters were a popular means of information.

5.6 Partnerships

- A permanent fund for environment, to come from road contractors and tourist agencies, is being set up as a pilot in several gewogs (districts of several villages). In a couple of years this might extend throughout the entire country. The monastic body could be included in this.
- Notion of appointing an “environmental specialist” monk at every monastery and monastic school. “We will select a focal person on the environment from each of the monasteries. And he will be responsible.”
- There is a need to work with the government (Secretary of Religious Affairs, Karma Penjor said: if there is interest then I cannot ignore it. I am the responsible person to plan the activities from the government side”.)
- A need was identified for an informative handbook on the environment, ideally produced by a secular NGO wanting to partner with the monks.
- Radio is key to many regions of Bhutan right now. We must move to have a regular radio program. “Radio is THE community in Bhutan”.

5.7 Celebration

- June 2 is already Community Forestry Day – could the monks give this a sacred dimension? Community Forests are being set up.
- Bhutan already has a species festival, celebrating the importance of local species. RSPN initiated a festival for Black-Necked Cranes in 1998 at Phobjikha. It is popular with tourists and each contributes \$50 to a program to protect the species.
- Real emphasis on exploring awareness programs.
- RSPN has created some terrific resources – the Nature Club Activity Handbook and the Basic Gardening Handbook among others. These could be very useful if posted on the internet for download, which can perhaps be adapted to inspire other Himalayan Buddhist communities to do something similar.

6.0 STORIES AND ANECDOTES

The story of the wild dogs and of the need for balance

“In my area we had a problem of wild dogs 20 years ago, and they were killing the livestock, so the government ordered all the wild dogs to be killed. And now there is the problem of wild pigs, which are running amok, because there are no wild dogs to keep their population under control.” Chief Forestry Officer Sonam Wangchuk, in the context of the following quote: *“There are four elements, and these should be kept in balance. If we cannot keep all four of them intact, then we cannot have outer happiness”*. MONK: Wangdue Lam Neten.

The story of the nunneries

One nunnery in the south of Bhutan could not send delegates to the conference. The rains had been heavy, and they were cut off by flooding: in the rainy season there is no bridge. So determined were they to come that they were making plans to come in a raft; however when rain fell a few days before the conference, the principal decided, reluctantly, that it was too dangerous.

The stories of the rocks

Several in the secular community as well as in the dratshang told a story about how in one district road workers tried to remove a stone to widen the road. Yet it was a sacred stone and despite the big machinery it could not be moved. Only after the monks gave offerings and prayers could it be shifted.

Another example (agreed by everyone as truth) was set more specifically on the road between Paro and Thimphu at the “elephant rock” which has a natural image of an elephant on it. When the road was widened, the monks were not consulted about this sacred rock. A snake appeared and did not move and the local people came to venerate it and guard it. “Even people from our office wanted to come and see the snake” (RSPN presentation). The monks did pujas and the road was diverted to not move the rock – and at that point the snakes disappeared. Today, that is the only portion of the road not widened.

These stories were used as illustration for the notion that monks should be consulted on all infrastructure projects to see whether there is an impact on sacred land.

The story of the lice

Three years ago the Dechen Phodrang Monastery and monastery school in Thimphu was in terrible condition. There were just two water taps for two to three hundred monks, just one toilet block, and without clean water tap in the kitchen, the cooks did not wash their hands properly. A team of doctors visited: four in five of the young monks had lice and patches of hair loss. There was one toilet block, which was dirty, and the monks used bushes as a toilet. The kitchen was dirty and powered by wood. The walls were black. A government/RSPN program was financed with new toilet block, showers, running water and electric cookers. This led to a substantial improvement in the health of the monks, and RSPN developed a manual to show monks how to grow flower gardens.

Useful images and quotes

- A favourite image by several people we talked to (in the context of spending too much time researching) is: “if you are shot by an arrow you first pull out the arrow. Only then do you work out where it came from, what it is made of, etc.”

- “There are four elements, and these should be kept in balance. If we cannot keep all four of them intact, then we cannot have outer happiness” (Wangdue Lam Neten)
- The Buddha touches the earth to give witness to the earth.
- Buddha: Karma is Leg Jum Dray; whatever you do to others comes back to you.
- Sir Isaac Newton: Newton’s third law – every action has its own and equal opposite reaction.

7.0 WORKSHOP QUOTES

- Secretary of the Chukha Monastic Body: “This is the first workshop organized on Buddhism and Environment, and it has been very beneficial as there have been various presentations on the environment and its impacts of economic development”
- Secretary of the Haa Monastic Body: “This is the first opportunity to attend such a workshop and as been immensely beneficial. We always knew about the environment but we never had the opportunity to actually meet, discuss and express our views”
- Student from a Nunnery in Punakha (Olakha Shedra): “This workshop has been very good, and what we have learnt in these two days I intend on going back home and passing on to my friends”
- Student from a Private Nunnery in Bumthang (Tang): “This workshop has been very useful as I got a lot of information from the various presentations and discussions. I can take all this back to my community and friends.”
- Secretary of Nimalung School in Bumthang: “ I am very grateful for such a workshop as I not only learned a lot but also had the opportunity to share views with other participants from all over the country. I can take some of the ideas back to my school and try to implement them”
- Secretary of Pema Gatshel Monastic Body: “This workshop has been very beneficial as we can take all that we have learned back home and educate people there. It will be difficult to implement our ideas we have come up in the workshop back home as most people there are not educated or aware on the environment. And also back home we don’t have the capacity to hold big workshops like this”
- Student of a Nunnery in Paro (Kila Goemba): “It was a very good workshop because I got a lot of information on the environment. I never had the opportunity to attend such a workshop. We can take back what we learnt from the workshop to our school and together help conserve the environment. I also wanted to thank the organizers for this workshop”
- Teacher of a Nunnery in Tongsa (Kuenga Rabten): “Even if we could not contribute a lot to the discussion, we got a lot of new information. So I want to take all that I have learnt back to my school and try to implement some of the ideas discussed at the workshop.”
- Vice Principal of the Lekshey Jungey School in Punakha (the model school we visited): “ It was a very good workshop. We already know about the environment but the workshop provided a lot of additional information that will be very useful

such as building relationships between different sectors and organizations and the adverse impacts of economic growth on the environment. To me, I found Climate Change the most interesting topic.”

- Lam of Wangdiphodrang: “ I am very thankful for this workshop, it provided a lot of information that is different from what we have heard at other workshops.

8.0 RECOMMENDATIONS AND NEXT STEPS

The Secretary of Religious Affairs, Karma Penjor, was keen that the program could be concrete as well as theoretical. Before initiating Science Toolkits and Eight-Year Plans for monastic leaders in Bhutan, he asks for a prior commitment from TTF and ARC to fund a sanitation project at Gorina Monastery, a remote monastic school above Paro with pitiful sanitation. The proposal is to spend \$22,000 to \$25,000 on an eco-friendly and usable model school sanitation block.

The next steps of this program are therefore to:

1. Find funding for Gorina Monastery (which will open up the entire Himalayan Buddhist program within Bhutan, and mean that several generations of young monks are kept cleaner and healthier through their school lives. It also gives some good compost to the monastic garden).
2. Translate this meeting report into Dzongkha and distribute it to the Dratshang
3. Assess whether a second Compassion and Conservation conference in late 2012 or early 2013 would be useful for the Dratshang.
4. For the Dratshang to decide whether it wants to create a long-term environmental plan and science tool-kits and if so whether it wants to proceed alone or in collaboration with TTF/ARC. In some countries each monastery has created its own plan according to guidelines compiled by the entire monastic body, in others there is a single plan.
5. Fundraise and set a date for the next conference, and a timeline for monks to assess their current situation and suggest elements of the plan.

9.0 MEDIA COVERAGE

The conference on Compassion and Conservation in Bhutan made the front page of leading Bhutan newspaper *Kuensel*. **"Reds' all for 'green' cremation"** was the headline of the article, which led with a decision made yesterday by the dratshang, or monastic body (known for wearing red) to promote cremations without using firewood. This would save thousands of trees from being felled every year. An electric incinerator was established at the Thimphu crematorium more than ten years ago, but it has scarcely been used. In addition the participants suggested alternatives to prayer flags (currently when someone dies it is customary to erect 108 mani flags, each on a separate, freshly cut tree stem, which is later burned). As *Kuensel* reported, between June 2007 and June 2008 some 60,178 trees were felled to meet the demand for poles. Alternatives could include bamboo, which is fast growing, or steel posts which will last for a long time. The conference was also covered in other leading Bhutan papers, including the *Bhutan Times* and the *Bhutan Observer* and on

the radio (Bhutan Broadcasting Service, BBS). It was one of the lead news stories on Bhutan television on September 6.

<http://www.arcworld.org/news.asp?pageID=478>

<http://www.buddhistchannel.tv/index.php?id=40,10439,0,0,1,0>

10.0 POST CONFERENCE FEEDBACK

Nuns: “before this conference we planted trees, managed waste, managed gardens and every Sunday we would clean up the town of our temple. On June 2nd we would plant trees and we would also celebrate the Karmapa’s birthday on July 22. Now “I have hopes that we can reach further outside the nunnery.”

At the close of the conference, meeting organizers asked all participants to fill out Post-Survey. A copy of the survey and the raw data collected are presented in Appendix 5. A summary of that data follows here:

10.1 Post Survey Summary

All of the 31 participants who filled out the post workshop survey found the workshop to be very useful and informative. One individual also stated that having an environmental curriculum would be very useful in the monastic schools. Workshop topics of most value were related to climate change, the TTF’s experience in Mongolia, waste management, and the interconnectedness of our world and the value of biodiversity.

Most of the participants wanted more information and awareness on the environment and said that similar workshops should be conducted more often. Participants also want information regarding formation of committees to address environmental issues within the monastic schools and to help address specific issues such as waste management and sanitation. Most participants want more information.

Most of the participants were open and encouraged the idea of developing and implementing an Eight Year Plan in Bhutan for environmental conservation. However, they all agreed that it would be more appropriate for it to be a Five Year plan in Bhutan because it would be in line with Bhutan’s existing 5-year development plans.

The participants were also open to adopting a Conservation Toolkit for their monastic schools. They suggested using posters, books (visual aids), guidebooks on the environment that draws information from the sutras and books that highlight the relationship between the environment and religion. Some suggested that a committee to be first formed to discuss this.

Almost all the participants agreed on the idea of introducing a curriculum on ecology and environment in the monastic schools. They also suggested various means and tools for teaching about the environment to the monks. Environmental classes should be conducted on Saturdays and taught using books, debates and presentations. Some participants were

hesitant, as they said that the curriculum should be first in line with our religion and also that it should be designed by a committee in Bhutan.

All the participants were very inspired and learned a great deal from the workshop. They want to take what they learned and convey it to the others in the community and schools. They were very inspired to develop and implement environmentally friendly projects related to sanitation, forestation and waste. However, the participants stated that support was required, such as in funds and capacity building to specifically address issues such as waste management, pollution and deforestation. They also expressed the need to conduct more workshops such as this one bi/annually.

Suggestions for improving the workshop included to have more case studies on particular environmental issues in Bhutan, shorter time frame, include trainings and strategies on how to address certain environmental issues and to conduct this workshop on their own in local communities for convenience sake. Participants also stated that study tours to other countries to see their projects would bring valuable information. They suggested having the agenda few months ahead in order to be prepared and thereby have better discussions. More presentations on the watershed areas and the relationship between environment and religion would also make the workshop more valuable and appropriate. A participant also recommended possible field trips within Bhutan. The presentations in the workshop were suggested to be conducted for all the monastic schools in Bhutan. Another participant also requested that 'tsampas '(monks in meditation in very rural places) be invited.

11.0 THANKS

Many thanks to Dasho Karma Penjor and Lopen Tashi Galay for Bhutan's Dzatshang Lhentshog Council of Religious Affairs for inviting ARC and TTF to conduct this conference. Both met with us several times, attended and helped facilitate the conference, and expressed strong support of this initiative.

The conference would not have been as successful without our wonderful Program Coordinator Nawang Eden for all she did to link with the Monastic Body and organize the event. Phurba Phurba translated materials from Dzongkha to English and interpreted for Sue Higgins and Victoria Finlay during their presentations. And Karma Penjor, Secretary for the Council of Religious Affairs, who met with us, attended the beginning and the end of the conference, and has expressed his strong support of this initiative.

Ultimately, deep thanks goes to all of the monks, nuns and teachers who shared their heartfelt ideas on the Bhutan's environmental future and their role in it.

APPENDICES

Appendix 1.0 Workshop agenda

Venue: Hotel Migmar, Changjiji

Date: 05/09/2011

Agenda for Day 1

Time	Activity
08:00 a.m.	Registration of Participants
09:00 a.m.	Arrival of the Chief Guest
09:05 a.m.	Marchang Ceremony
09:10 a.m.	Welcome & Objectives of the Workshop by the Project Manager
09:15 a.m.	Address by the Chief Guest
09:25 a.m.	Vote of Thanks
09:30 a.m.	Tea Break

10:00 a.m.	Introduction of the Participants and Agenda Review
10:15 a.m.	Address on Environment (Royal Society or the Protection of Nature)
10:45 a.m.	Relationship between Buddhism and Environment in this Changing World (by a participant)
11:15 a.m.	Preservation of Biodiversity (Department of Forest and Park Services)
11:45 a.m.	Waste Management (RSPN)
12:15 p.m.	Climate Change (National Environment Commission)
12:45 p.m.	Lunch Break
1:45 p.m.	Watershed Management (Watershed Management Division)
2:15 p.m.	Health and Environment (Ministry of Health)
2:45 p.m.	Tea Break
3:15 p.m.	Eight Year Plans (Victoria Finlay, Alliance of Religions and Conservation, UK)
3:45 p.m.	Joining Conservation and Buddhism through Science Tool Kits (Susan Higgins, Executive Director of The Tributary Fund, USA)
4:15 p.m.	Discussion and Examples of Successes in Mongolia (powerpoint)
05:00 p.m.	End of Day 1

Agenda for Day 2

Time	Activity
9:00 a.m.	Next Steps: Purpose of and instructions for Break Out Sessions
09:30 a.m.	<p>BEGIN SESSIONS</p> <ul style="list-style-type: none"> • 1. Ways monks/nuns can mentor their communities in conservation actions through leadership (facilitated by RSPN) • 2. Steps for setting up “Green Monasteries” (set up recycling, composting, energy efficiency, gardens, waste management, conservation brochures and signage, etc. Discussion facilitated by NEC) • 3. Methods to enhance coordination among religious institutions, media, agencies, scientific researchers and conservation organizations (facilitated by a participant)
10:30 a.m.	Tea break
10:45 a.m.	Continuation of the group discussions
1:00 p.m.	Lunch Break (Arrival of Chief Guest and join for lunch)
2:00 p.m.	Presentation on group work (Group 1)
2:30 p.m.	Presentation on group work (Group 2)
3:00 p.m.	Presentation on Group work (Group 3)
03:30 p.m.	Keynote address by the Chief Guest
4:00 p.m.	End of the workshop with Tashi Moenlam

Appendix 2.0 Summary of presentations

Day 1

The Honorable Secretary of the Dratshang Lhentshög graced the opening ceremony of the workshop, and gave the keynote speech. The more than 80 participants included Lam Netens,

Principals from Shedras and Lobdras, Lopens, Nuns and official environmental organizations and agencies in Bhutan.

Welcome note by the Project Manager, Lopen Tashi Galey

Lopen Tashi Galey stressed that Bhutan's environment is pristine, partly through the farsighted actions of the kings and leaders of Bhutan throughout the last century. But he said that this has now been challenged by economic development. Most development threatens the environment. He emphasized the importance of collaboration between the monastic body and donors on the environmental front. Currently, UNICEF is helping to construct toilets in monastic lobdras where children study. He also reminded the sangha of the importance of not polluting water. Most monasteries are located on hills at the headwaters of drinking water sources. Therefore, they have particular responsibility not to pollute. He also suggested introducing curriculum on environment in our monastic schools. The objectives of the workshop were introduced.

After the welcoming ceremony, Chief Guest DASHO KARMA PENJOR gave an opening address.

He thanked all participants for attending and expressed his gratitude to The Tributary Fund (TTF), Alliance of Religion and Conservation (ARC) and Ms. Nawang Eden, the Tributary Fund's project manager. He talked about how the environment is one of the pillars of Gross National Happiness (GNH), the guiding philosophy of development in Bhutan. He also said that Dratshangs have played a critical role in preserving our sacred places from increasing waste, population and tourists. Today, he said that environment is an area of opportunities for the monastic institutions to garner support and funds from both internal and external agencies.

Vote of thanks

The inaugural process ended with vote of thanks by the project manager, which was followed by presentations by various environmental organizations.

Presentations

1. Environment by National Environment Commission (NEC)

Mr. Tshering Tashi from the National Environment Commission started from the definition of the environment, followed by a primer on the environment in Bhutan, including the mammal, bird, orchid and rhododendron species found in Bhutan as well as international recognition conferred to Bhutan for conservation initiatives. He also highlighted infrastructure development, urbanization, electricity projects, and forest fires as the main challenges to the environment.

He discussed the various types of waste such as degradable and non-degradable, and how Thimphu's waste has increased drastically over the past few years. He highlighted 'middle path' conservation strategies including environmental impact assessments for all development projects, and imposing limits on factory waste.

Question 1: Venerable Lam Neten (Chief Abbot) of Wangduephodrang Dzongkhag, Pemba Tshering. *What are the differences between natural environment and environment? How is the NEC acting on the huge hydro projects that are proposed in some districts?* He said while these projects are vital for development, they are negatively impacting on environment, local deities and people. He said that there could be many solutions for such situation from the religious point of view.

Answer: Tshering differentiated the natural environment and environment as green sector and brown sector respectively. He agreed on the relationship between religions and development projects and narrated a story from Trashiyangtse in Eastern Bhutan. He said that during the road construction, a rock could not be removed from the site. All the sophisticated machines failed to remove the rock. It was only after consulting the monastic body, who confirmed it to be a sacred rock, that it was later easily removed after making an offering to the deities by the monastic leaders.

2. Relation between Buddhism and the Environment - discussion by participants

One of the monks spoke on the relationship between religion and environment. He said that according to religion, natural environment is divided into external and internal world. The external world consists of four elements – earth, water, fire and wind – and the inner world consists of all sentient beings. He said the ultimate aim of Buddhism is to achieve Buddhahood and that the environment is a means towards this end. However, he said that the environment is challenged by development projects like huge hydro projects. These projects are inevitable especially considering the economic development of the country. But sometimes they do so cruelly, as if they do not have religion. Monks consider that all the elements like trees, rivers, rocks etc. have owners, like deities. He said that it is not proper for them to interrupt such process. He suggested that it would be proper if the NEC could directly contact the Dzatshang for anything regarding religion.

Another participant spoke on the importance of the environment, with wisdom from the Buddhist sutras. In one of the sutras the Buddha said that destroying a sapling is a sin. In another he said one should not defecate in open space or forests. The Buddha said that we should plant trees and take care of them. He also said that there is a proper way to start activities like cutting down trees and excavating soil or rocks. Particular offerings and rituals should precede it. He said that Buddha had written about waste management too, that we should clean our surroundings and that the benefit of cleaning is that it leads to happiness of God and others. He concluded that there is strong link between environment and religion.

3. Biodiversity conservation in Bhutan (By Sonam Wangchuk, Chief Forest Officer, Wildlife Conservation Division, DoFPS/MoAF)

The presenter gave an overview of protected area management and wildlife conservation in light of accelerated development. (See detail in power point presentation)

Question 1: What is the benefit of protecting animals and how many animals can be protected? What role does the Forest Department play in increasing mining activities in the country?

Answer: In Bhutan, not much research has been conducted on the number of animals saved. They have only listed different species. They have also done research on the habitat. They can say how many bears stay in certain areas and currently they are conducting research on tiger in Bhutan. On benefits of protecting animals, Mr Wangchuk described the importance of a balanced ecosystem. He said that when he was a little boy in Punakha, there were many wild dogs harming their domestic animals. Then the government instructed to kill all the wild dogs. But the next year there were drastic increases in wild pigs affecting their crops - this is now one of the biggest human-wildlife conflict problems in the country. This, he said was due to killing their predators, the wild dogs. Therefore, there was imbalance in the ecosystem.

He also said that Bhutan could earn financial return from tourism due to our rich biodiversity. On mining activities he said that they do evaluation on all the projects. They

weigh the cost and benefit. If the benefit is more than cost, the project is approved. But they have to access on the type of vegetation and animals residing in the area.

Question 2: Another lama pointed out that due to our pristine environment and presence of endangered species, there are many tourists coming in our country. Tourists go to the mountains and pollute the environment, he said. The benefit from tourism goes to the operators who are based in Thimphu. Rural people do not get the benefits. On the similar fashion, he also pointed out about the construction of roads. The government has contracted out the road construction to a private company on contract. And all the benefit is reaped by the particular contractor leaving common people without any benefit. Therefore, he said that only a handful people benefit against the cost on environment. He asked if these people pay some amount for the environment they have damaged. He also suggested having an organization overlook such activities to create accountability to the general public.

Answer: On awareness, he said that forest department is educating people in their area. He also said that community forest is initiated, so that people can take ownership of forest. They can also benefit from the forest. He also stated that they have initiated a Permanent Fund for conservation, which is in pilot phase in some gewogs.

4. Waste Management (By Ugyen Lhendup, RSPN)

He started his presentation with cause and effect strongly linking religion and science. Then he defined waste and type of wastes. He then asked why the waste is problematic and how waste can be managed.

Question: One of the participants said that policy to ban plastics is bad. Rather, he said that to keep clean, one needs plastics. He said everyone should take plastics wherever they go and put their waste in it and dispose of it properly. He said that plastic is main solution for the waste like in other country.

Answer: The presenter agreed that plastic is important to keep clean. He said that it is used in other countries but the difference is that we do not know how to manage it. Bhutanese throw plastic everywhere. Lopen Tashi Galey said that monks should pass this message during their religious discourse.

5. Climate Change (By NEC)

An official from National Environment Commission explained climate change and its impact in Bhutan. He said that Bhutan is located in a dangerous seismic zone. He also talked about the diversification of economic activity rather than focusing only on hydropower projects that will be affected by climate change. He highlighted immediate measures to reduce the negative impact of climate change and the importance of a long-term plan.

6. Watershed Management (By Sonam Choden, Watershed Management Division)

See the presentation. Sonam Choden from the WMD talked about the management of watersheds in Bhutan. She started off with describing a watershed, followed by the creation of the WMD under the Department of Forestry. She went on and talked about the organizational structure, vision, goal and objectives of WMD. The WMD policies are at three levels: macro, sectoral and local level. She went on and said that the watersheds in Bhutan are in good condition but have to be cautionary in the future to ensure that they do not get deteriorated. She talked about the value of water in the Bhutanese context, where water is considered one of the four elements. Water bodies are considered sacred in Bhutan and thus protected. The negative and positive impacts of human activities on water bodies were also presented. The causes of land degradation in Bhutan were also covered. They included

overgrazing, forest fires, unsustainable agriculture practices, mining and so on. She concluded by talking about interventions on managing watersheds in Bhutan.

7. Health and Environment (Rada Drukpa, MoH)

(We have a copy of the full presentation) Rada Drukpa started by describing the constituents of health and the environment. She talked about the environment-society interactions, describing the diseases arising from the environment. She then talked about the impact of climate change on health – Climate Sensitive Diseases (CSD). The characteristics and health outcomes of CSD were presented. She then discussed how one could reduce the impact of climate risks; reducing exposure, reduce vulnerability and improving capacity.

8. Eight Year Plan, Tool kits and Success Stories.

Presentations were made on the above three topics. (See the presentation). The following questions were raised.

Question: Venerable Lam Neten of Wangdue thanked the presenters for their support in Mongolia. He then asked if similar support could be provided to Bhutan.

Answer: Susan Higgins responded that they will support the Dratshang in making the eight-year plan. She said that in Mongolia the plan was made by lamas and NGOs.

Question: Another said that Bhutan is located between two giant countries; India and China, both competing for industrial development. In such circumstances, he asked whether Bhutan could make any difference.

Answer: Victoria Finlay said that Bhutan could do many amazing things and be the model for these countries. She said that it is critical to have a plan of action, in order to change things.

Appendix 3.0 Notes prepared by the three discussion groups

This section is key to the conference. On the second afternoon, after spending a morning in three groups, debating passionately, the monks gave presentations (in two instances via PowerPoint) on how they felt this movement should go forward.

Group One

The subject for Group One was to look at the sacred texts and sutras that highlight the importance of environment to pilgrimages and monks visiting monasteries and sacred places. Ways monks and nuns can mentor their communities in conservation actions through leadership.

Group one listed several places where the monastic body could convey environmental messages: during annual rituals and other rituals, religious festivals, blessing ceremonies, religious discourse and when people come on pilgrimages. They also listed various strategies for mentoring their communities, including advertising materials like posters that display the importance of environment from the religious aspect, religious practices to conserve environment and prayers and offerings to the deities. They felt that the entire monastic community could take the role as a mentor, be it individually or in a group. Group one also presented how the environment is related to Buddhism through the sacred texts and sutras.

1. How is environment related to Buddhism?

- Buddhist Master, Lopen Ludrup said that Buddhist vows and code of conduct are as strong as soil, and are sources for enlightenment as soil is a source for everything.
- From Sutras: Water is cool, tasty, light and soft. It is clean without any dust. It does not have any impact on the food we eat. It also does not affect throat while drinking. These are the

qualities of water described in Buddhist sutras. Sutras also say that Bodhisattva or Buddha mind is like a celestial being's wish fulfilling tree. Instead of decreasing, the more fruit one reaps more it gives. Another sutra says here are different species of animals, trees and plants in the forest. These will not harm anyone. If one becomes friends with nature, one will gain optimum joy and happiness and peace. When will such good times come?

- It is also said that one shouldn't throw trees that one used as toothbrush and also shouldn't spit in open spaces. One also should avoid defecating or urinating especially in watershed areas.
- Buddhist believes that all the sentient beings from six realms were our parents at one time in our lives. As such, happiness and satisfaction of all sentient beings depends on the place they live and type of habitat they have. These places and habitats come from our natural environment. Therefore, there is a strong relationship between Buddhism and environment.

2. Where are the potential places and times for advocacy?

- During the annual rituals and other rituals
- Religious festivals
- During blessings ceremonies
- During Religious Discourse
- When people come on pilgrimage

3. What are the strategies for advocacy?

- Advocate based on present situation
- Make advertising materials like posters displaying importance of environment from the religious perspective.
- Religious practice to conserve environment
- Prayers and offerings to the deities.

4. Who will advocate and take responsibility?

- Lams, lopens, monks, lay monks, nuns, volunteers – or by forming groups.

Group Two

The subject for Group Two was to identify the steps for setting up "Green Monasteries" (set up recycling, composting, energy efficiency, gardens, waste management, conservation brochures and signage, etc.)

	Activity	Objectives	Alternative
1	Prayer Flags	– To achieve the vision of Gross National Happiness. – To achieve the Government Policy of maintaining carbon neutrality.	– Using rope and thread to hang flags – Substitute 108 prayer flag poles by using branches of trees or iron or metal prayer flags instead of cutting down 108 trees.
2	Firewood	– To keep 60% forest coverage as per the Constitution of Bhutan. – To conserve soil fertility and land management	– Using gas and electricity for cooking. Instead of stone bath we can heat baths in different ways.
3	Stone Bath		– Use electricity and solar
4	Cremation	– To conserve and preserve forest – To promote health and sanitation – To reduce CO2. In Buddhism, if we preserve our environment and maintain good sanitation, we believe all celestial	– Use electricity-fired crematorium furnace for cremation.

		beings, serpent spirits and humans will be happy and prosper. Preservation of environment prevents landslides and floods.	
5	Waste Management	<ul style="list-style-type: none"> – Reduce waste, reduce harm on natural products and protect earth and water from pollution. – On promotion of sanitation and hygiene, Lord Buddha said that there were five benefits from cleaning. 	<ul style="list-style-type: none"> – Promote segregation of wastes. Composting of biodegradable waste and selling of waste like plastics and bottles for recycling and reuse. – To keep waste bins on the road and path sides.
6	Greenhouse	<ul style="list-style-type: none"> – To achieve a goal self-sufficiency. – To promote organic farming and products 	<ul style="list-style-type: none"> – Avoid using chemical fertilizers.
7	Flower garden	<ul style="list-style-type: none"> – For aesthetic reasons 	<ul style="list-style-type: none"> – Make botanical parks and flower garden
8	Watershed management	<ul style="list-style-type: none"> – To protect water from pollution – To protect watershed area. 	<ul style="list-style-type: none"> – Metal fencing. Planting trees in the watershed area and prohibiting cutting down of trees, particularly for watershed area.

Group Three

The subject for group three was to discuss how to enhance coordination among religious institutions, media, agencies, scientific researchers and conservation organizations.

(A) Coordination and collaboration among different religious institutions to conserve and promote natural environment

- a) Introduce curriculum on environment in the religious institutions.
- b) Necessary to have guidebook on environment in the (monastic) institutes.
- c) Development by religious institutions of projects on tree plantation and flower gardens

(B) How can religious institutions collaborate with government to promote the environment?

- a) Implement a policy by NEC to consult religious institutions regarding the potential effects of any developmental work on the natural environment.
- b) This will help in achieving the vision of Gross National Happiness

(C) Collaboration between Non Government Organizations and Religious Institutions

- a) Develop a plan on preservation of the environment by religious institutions and cooperate with NGOs.
- b) Collaborate, cooperate and support research on the environment by researchers and environmental scientists.

(D) Collaboration between religious institutions and media to preserve the environment.

- a) Appointment of focal person on Environment from each religious institution.
- b) Publish and air on relationships between religion and environment in the print and broadcast media.
- c) Write poems on the environment and publish in the newspapers.

Appendix 4.0 ARC and Tributary Fund Presentations

3.1 ARC: Long Term Plans in Bhutan. Presentation by Victoria Finlay in English, with simultaneous translation into Dzongkha and a powerpoint translated in advance.

Thank you for welcoming us to Bhutan. Five years ago we started hearing calls coming in from many different faith organisations round the world. “We feel alone in this environment thing,” they were saying. “We know that we should recycle our waste and change our light bulbs and do an audit... but we are so small and this environment problem is so huge... what can we really do?”

So three years ago, with the support of UNDP and with a great deal of consultation, we created a basic framework for faiths to make a plan about the environment. It was intended for faiths who wanted to put practices and teachings in place that would protect their sacred land, and their people for many generations. We first called it Seven Year Plans because the idea was to make a plan and spend the next seven years setting things in motion that mean that in generations to come, it is natural that the faith should be a leader in the environment. We knew the implementation of all of this couldn't be done overnight – faiths always take a long time to change, but when they have made a decision, then their decisions last for many, many years.

The Daoists in China thought eight was luckier than seven, and so did the Buddhists in Mongolia, and I guess the Bhutanese Buddhists might agree. Then the Kagyu Buddhists under the Karmapa did a 108 point Plan (though not, fortunately a 108 Year Plan). In 2009 at Windsor Castle we launched 31 plans from 31 different faith groups across the world.

Here are the Buddhists from Shanghai, with the Secretary General of the United Nations, Ban Ki-moon, and Prince Philip, getting a certificate to celebrate their plan, which included lobbying to protect their river from pollution. Since then we have had additional plans from the Mongolian Buddhists and the Church of Scotland.

The Plans are not strict, they just pose a series of questions that every faith is answering in its own way, its own form, its own voice and according to its own strengths.

We identified seven key areas where faiths were potentially powerful and had the chance to have a real effect. I will go through these slides quickly just with one or two examples from each.

1. Assets: In 2007 the Daoists in China dedicated their first eco-temple, on a holy mountain. It is a place where a million pilgrims from all over China pass through every year and has information about how good Daoists must look after nature. It involved taking an existing asset – a run-down temple building – putting forward a vision to funders, and they invented a new tradition.

2. Education: Two years ago the first Hindu state primary school opened in the UK. The building includes rainwater harvesting, there was grass on the roofs for insulation, the children learn about the environment, they make gardens AND the school is beautiful. Last year it was rated the most environmental school in the UK. How did this happen? It happened because the Hindu community sat down and asked “What IS a Hindu school in England”, and they decided that any truly Hindu school has to love nature. So there's a question: What IS a Buddhist school? In Bhutan where there are so many rare wild animals it is vital that all children, not just monks, are taught about these animals - how special they are, why it is our duty and care to look after them.

3. Wisdom: Everywhere in Bhutan so far we have heard from monks – “If you know the scriptures then you must know that we must care for nature”. Yesterday we heard from a Bhutanese conservation scientist that one of the things that he believes would help preserve the snow leopard – as well as scientific research – is a story book which, he says “Shows children that there are such things as snow leopards. And that they are magical.” Are there stories you can tell to the ordinary people? Can you publish those stories in monastic printing presses? What wisdom can Buddhism

give to Bhutan as it changes in the future? And perhaps that wisdom and those stories can be told throughout the Himalayas.

4. Simple Living: Actually you seem to have this figured out in Bhutan, but for example

- In the south Indian town of Kottayam the Church of South India set up a snack centre using bio-gas – from the waste food, the scraping. At first people thought the idea was silly – why pay 40,000 rupees to set up a snack centre - but it recouped the money in one year in lower fuel bills, and now it's a model of environmental excellence. Two benefits for the price of one!
- Bhutan's chicken and eggs mostly now come from factory farms where the birds are caged up really small. In England we have a growing movement in favour of free-range eggs which only happened because of consumer purchasing power. And a lot of it happened from Christians who said "this is not kind." I know that in Bhutan Buddhist monks are often vegetarian in the monasteries. But Perhaps the monastic body could lead a free range movement to say that this kind of farming is not right for a country that believes in compassion to sentient beings.

5. Media and Advocacy: A few years ago Muslim boarding schools in Indonesia found that the water they used for ritual cleansing before prayer was becoming dirty because of logging and mining upstream. So they lobbied, and they got their pupils to monitor the water quality – and two years ago a National Park was formed in that area, with all these industries restricted.



The monks in Mongolia created this thangka of the Old Man of Long Life to show how people should protect the land – at the bottom left there are monks blessing the clear water, to the right there are illegal woodcutters being asked to pray with the monks. At the top is a blessing of mountains, and a scene where men are going to collect sacred texts about the land. Can Bhutan have something like this?

6. Partnerships: who else will help you in your plan? In Mongolia the Asia Foundation and the Tributary fund have provided funding for training for monks on mining science BECAUSE they have developed an eight-year plan, which showed they were passionate about the impact of the mines.

7. And one of my favourites – celebration. A year ago the Sikhs decided to celebrate March 14 as Sikh Environment Day. Their target was to have 100 schools and 100 temples (gurdwaras) marking this day with teachings and prayers and tree planting and other environmental actions. Actually 450 joined in! We hope that 2012 will be bigger. In Bhutan you already have June 2. How can you extend that? Is there more that the monks can do to lead it beyond just Social Forestry and make it a celebration of the divine that lives in all of nature?

We are here to learn from you. We don't know if what we have done in other countries is useful to you or not? Bhutan is a pristine environment now. You still have most of the population living traditional lifestyles. And your valleys are still full of forests, you have few roads, comparatively few cars... you are a model right now for environmental living.

So what is the point of an Eight Year Plan? We have heard from many monks we have talked to in the past few days that in 30 years time they know Bhutan will be developed so much – more people, more roads, more TV, less time to go into nature. So this is about preparing NOW, so that in 30 years time the monastic community is leading the way and making sure that ALL houses built in Bhutan in the future are compassionate to nature, and that ALL decisions about dams and roads and power stations remember nature and the principles of compassion. And your precious wild animals – your takins and your tigers and your snow leopards and your bears - are conserved carefully, because of the beliefs of Buddhism.

We have noticed that when faiths have had their Long Term Plans, they have attracted funding to them. As you plan the future for your own community, and the environment around it, it is important to be adventurous. What about a Bhutanese Buddhist labelling scheme? A monastic energy standard? Rules about whether you do or don't do prayers for new mining industries? A school curriculum about nature? A book of stories about the Buddha and Guru Rinpoche and their relationship nature?

If the young people are to be the new warriors for nature must understand better what they are fighting for. So take them into nature, show them the wonders of creation. Bring in scientific research. Tell them the stories from your tradition. Just as the idea of Gross National Happiness is a story that people around the world have loved, so you can tell stories about the environment that can also inspire millions around the world who are not Buddhists. What is it that in 500 years time Buddhists in Bhutan will look at and say “we made a difference to this land”. What will it be? What is it that you want it to be?

3.2 Presentation on Science Toolkits for Monastic Leaders by Susan Higgins of The Tributary Fund (TTF), in English with oral translation to Dzongkha.

TTF has developed a replicable community engagement methodology for monks and nuns in Mongolia using trainings and a multi-tabbed “tool kit” package. We will replicate this package for Bhutan's Monastic Body, if invited. To build capacity for monks and nuns to initiate conservation action in their communities, we start by conducting trainings on the utility of the kits prior to their distribution. There can be many outcomes, including new partnerships with research scientists to collect data, creation of community demonstration projects on monastic grounds (e.g.; gardens, solar paneling, water collection, garbage maintenance, tree planning, erosion prevention, composting toilets, etc.), development of ecoclubs, and conservation leadership activities in their communities. This work also involves evaluation to measure successes.

Tab	Title	Content
1	GUIDELINES FROM SACRED TEXTS	A survey of religious teachings and literature that illuminates the compatibility of conservation ethics and practices with spiritual belief (e.g., the significance of animals as sentient beings).
2	BACKGROUND ON KEY CONSERVATION INITIATIVES	A primer on local and regional conservation issues, and a listing of in-country experts and organizations (conservation biologists, wildlife scientists, land managers, National Environment Commission, the Royal Society for the Protection of Nature, etc.) who can and have provided updates and information on these conservation issues.
3	CITIZEN SCIENTIST TOOL KIT FOR FAITH LEADERS	A set of guidelines and data sheets to help faith leaders collect data specified by research scientists. This could include recording wildlife sightings, water quality data, vegetation cover, etc., for specific research projects (e.g.; spotting pika or snow leopards in Bhutan.)
4	EIGHT-YEAR PLAN DEVELOPMENT	A strategic plan for conservation within the faith. This plan outlines exactly how the faith group is going to take care of the Earth in an eight-year timeframe.
5	HOW TO DEVELOP ECO-CLUBS AND ECO-CAMPS IN MONASTIC SCHOOLS AND COMMUNITIES	Will include suggested structures, camp/club policies, curriculum, activities, etc.
6	HOW TO CREATE "OPEN SPECIES DAYS"	These community festivals, facilitated in part by the monastic leaders, celebrate the importance of species found in local habitats; also include medical visits, skits, sport.
7	HOW TO RAISE FUNDS, BUILD PARTNERSHIPS	
8	OBSERVATION TOOLS AND RESOURCES	Can include maps, species lists, measurement tapes, datasheets, journal, data collection tools (water samplers, etc.), digital cameras, GPS devices, binoculars, sketchbooks, and other tools needed for data collection.

SLIDE 1. SUCCESS STORIES: Now we will share a case study of Eight Year Plan development by the Center of Mongolian Buddhists, and Tool Kit utilization by local monasteries in small watersheds in Mongolia. This work started in 2004 and is thriving today.

SLIDE 2. EIGHT-YEAR PLAN: In 2010 Mongolian Buddhists created an Eight Year Plan to protect the environment. It took three major meetings and several smaller meetings around the country over three years. Many scientists and NGOs are helping them. And they are finding that after making a Plan, funding has begun to follow.

SLIDE 3. NEW LEADERSHIP POSITIONS: Because the Central Gandan Monastery felt conservation leadership was so important, it created a position within the Monastic Body, "The Secretary of Environmental Affairs." This is a photo of the Secretary, Venerable Amarbolt Dondog, and Betsy Quammen, founder of The Tributary Fund.

SLIDE 4. NEW LEADERSHIP: Also, the Central Monastic Body created a Task Force of monks, educators and natural resource experts from the government to develop the Eight Year Plan.

SLIDE 5. TRAINING: The Gandan's Secretary of Environmental Affairs conducts regular workshops for local monasteries on environmental issues. Many workshops are made possible through funding from other organizations such as the World Bank, Alliance for Religions and Conservation, Tributary

Fund and Asia Foundation. Next week the Gandan will offer a training on mining impacts to the monastic body.

SLIDE 6. TRAINING: The Tributary Fund conducts annual conservation exchanges in the United States for Mongolia's Buddhist leaders and ecology teachers. This is a photo of our 2010 delegation which received training on curriculum development. This time, we were also able to invite Lopen Tashi Galay pictured on the left.

SLIDE 7. TRAINING: Part of the training involved "Train the Trainer". This group of monks has just completed training in community engagement regarding mining in Mongolia. Next week they will carry the learning forward by offering the same training to 70 monks in Ulaanbaatar, Mongolia.

SLIDE 8. LOCAL INITIATIVES: In this case study, the Tributary Fund and ARC have been able to fund small grants to local monasteries for projects like greenhouse construction, irrigation, tree planting, solar panel installation, ecology curriculum and composting toilets.

SLIDE 9. REFORESTATION: This is Venerable Baasansuren, Head Lama of the Erdenezuu Monastery. At Erdenezuu's monastic school, he and the students built this greenhouse from smashed auto windshields. They are growing saplings here for planting in deforested areas around the monastery.

SLIDE 10. REFORESTATION: Here, the monks are conducting a replanting with local community members.

SLIDE 11. REFORESTATION: These khadags are made of nylon and are actually killing trees. The monasteries are starting a program of promoting biodegradable khadags.

SLIDE 12. WATERSHED CONSERVATION: Many initiatives in local monasteries focus on species important to their communities and the habitat. In Mongolia's Eg-Uur Valley, the monks help share information on taimen, the largest salmon species in the world. They also communicate with the poaching patrol set up through this project.

SLIDE 13. MINING: In Mongolia, mining is a big issue, not only in terms of economic and environmental impact, but also because it can threaten sacred sites. Here the 2010 Exchange Delegation visits the Golden Sunlight gold mine in Montana, USA. Do you recognize anyone in this photo?

SLIDE 14. ECO CAMPS AND ECO CLUBS: At the Dayan Derkh Monastery in Mongolia's Eg-Uur Valley, the monks and local science teachers offer a summer ecology camp for local children.

SLIDE 15. ECO CAMPS AND ECO CLUBS: Here's a photo of a biologist who conducts research on endangered birds in the Eg-Uur Watershed sharing information with local monks and children at the Dayan Derkh Monastery.

SLIDE 16. ECO-TEMPLES: The Erdenezuu Monastery in Central Mongolia created a tiny Eco-Temple, dedicated to the deity of nature – the Long Life Old Man – Dang Tsong. It has posters about animals and plants, and guidelines for people looking after nature. Daoists in China have also created a larger eco-temple, with monk and nun training workshops, and with notice boards for pilgrims.

SLIDE 17. ECO CAMPS AND ECO CLUBS: Children in local schools near the monastery also receive teachings in ecology through development of eco clubs.

SLIDE 18. ECO CAMPS AND ECO CLUBS: Here monks and local children receive a lesson in how to use a compass at the Dayan Derkh ecology camp.

SLIDE 19. ECO CAMPS AND ECO CLUBS: A monk at the camp shares a lesson on the connections between Buddhism and Conservation.

SLIDE 20. CITIZEN SCIENTISTS: In the Mongolia's EG-Uur watershed, there is a strong connection between taimen fisher researchers, Buddhist leaders, and the ecotourism flyfishing industry. No fish are allowed to be harvested and barbless hooks are used.

SLIDE 21. CITIZEN SCIENTISTS: Here, Ven. Tserin-Ochir, the head monk at the Dayan Derkh Monastery receives a training in water quality monitoring.

SLIDE 22. CITIZEN SCIENTISTS: Monks also assist with fish tagging to study their migrations and breeding.

SLIDE 23. CITIZEN SCIENTISTS: Next year researchers will introduce opportunities to monks to help with collection of wildlife species data (show leopards and wolverines) in remote regions.

SLIDE 24. TAIMEN DAY: Celebration is important. Once a year in the Eg-Uur Watershed, an entire day focuses on celebration of one species, the taimen. It starts with information for locals on the importance of the species.

SLIDE 25. TAIMEN DAY: Open Days also include fun and sport, like wrestling competitions.

SLIDE 26. TAIMEN DAY: Free medical checkups are also offered on Taimen Day

SLIDE 27. TAIMEN DAY: And skits about taimen. Here community members are quizzed on taimen facts in a Quiz Show.

SLIDE 28. All Taimen Days include chants from local monks to protect the taimen.

NOW LET'S LOOK AT OTHER EXAMPLES FROM OTHER FAITHS, SPECIES and LOCATIONS:

SLIDE 29 TANZANIAN CHRISTIANS: Africa has big problems of deforestation. Many Christian and Muslim organizations have decided to plant trees. In Tanzania they are creating nurseries for 8.5 million trees around Mt Kilimanjaro

SLIDE 30: CHINESE DAOIST MEDICINE: It's a big problem round Asia –traditional medicine has ingredients that endanger species like tigers, or are extremely cruel, like keeping bears in cages and milking them with open wounds for their gall. Daoists now have said officially that this medicine is not good – it will do you harm because it destroys the balance of nature.

SLIDE 31: ISLAM: Muslims are trying to reduce the number of plastic bottles used on their annual Hajj pilgrimage

SLIDE 32: We hope that this has inspired you, and whatever the Bhutan datsang decides to do themselves, if you would like us to help you go further, then we would be happy. And now we can learn from you. Are there any questions, comments or ideas you would like to share?

Appendix 5.0 References and websites

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Internet Resources

1. The Tributary Fund www.thetributaryfund.org
2. The Alliance of Religions and Conservation www.arcworld.org.
3. Website of World Resources Institute <http://earthtrends.wri.org>
4. Royal Government of Bhutan www.bhutan.gov.bt
5. Bhutan Ministry of Agriculture www.moa.gov.bt
6. National Environment Commission www.nec.gov.bt
7. Population Reference Bureau –data on population and demographic trends for countries across the globe www.pbr.org
8. Royal Botanic Gardens Edinburgh www.rbge.org.uk
9. International Union for Conservation of Nature’s website on red list of globally threatened species www.redlist.org
10. Website of the Royal Society for the Protection of Nature, Bhutanese NGO dedicated to nature conservation, www.rspnbhutan.org
11. Tarayana Foundation, Bhutanese NGO dedicated to socio-economic enhancement of poor and vulnerable communities www.tarayanafoundation.org
12. The Society of Conservation Biology www.conbio.org.
13. WWF in Bhutan [http://www.panda.org/who we are/wwf offices/bhutan/projects/](http://www.panda.org/who_we_are/wwf_offices/bhutan/projects/).
14. The College of Natural Resources Royal University of Bhutan <http://www.cnr.edu.bt/>
15. Wildlife and Poverty Research Center in Bhutan <http://www.happybhutan.org/>

Appendix 6.0 Conservation Resource List for Bhutan

CATEGORY	LOCATION	ORGANIZATION/CONTACT INFO	EXPERTISE
Research Scientist			
1. Dr. Pema Gyamtsho	Bhutan	Ministry of Agriculture	Minister of Ministry of Agriculture
2. Dr. Tashi Wangchuk	Bhutan	www.happybhutan.org	Conservation Management
3. Dr. Sonam Wangyel	Bhutan	wangsonam@gmail.com	Human-wildlife Conflict
4. Mr. Nawang Norbu	Bhutan	www.uwice.gov.bt	Species Migration and Climate Change

5. Dr. D.B Gurung	Bhutan		Ecologist and Herpetologist
6. Dr. Lam Dorji	Bhutan	Royal Society for Protection of Nature	Director of RSPN
7. Dasho Paljor Dorji	Bhutan	Royal Society for Protection of Nature	Founder of RSPN, Spokesman for Bhutanese conservation
8. Dr. Karma Tshering	Bhutan	Ministry of Agriculture	Head of Botanical Gardens and recreation with Dept. of Forests.
9. Mr Doley Tshering	Thailand	UNDP-Asia Pacific Regional Center	Regional Ecosystems and Biodiversity
10. Mr. Sonam Wangchuk	Bhutan	Ministry of Agriculture	Chief Forestry Officer of Wildlife Conservation Division
11. Dr. Tshewang Wangchuk	Washington D.C	tshewang.wangchuk@bhutanfound.org	Conservation Advisor to Bhutan Foundation
12. Dr. George Schaller	USA	Wildlife Conservation Society	Wildlife biologist, Tibetan Plateau
13. Dr. Tom McCarthy	USA	Snow Leopard Conservancy	Snow Leopard
14. Dr. Joe Fox	USA		Tibetan Plateau
15. Dr. Rod Jackson	USA		Snow Leopard
16. Dr. Bhim Gurung	India		Tiger Biologist
17. Mrs. Wendy Lama			Himalayan conservation education
18. Dr. Dan Miller	USA		Tibetan Plateau and Rangeland
19. Dr. Scott Mills	USA	University of Montana	University of Montana Professor
20. Dr. Joel Berger	USA	University of Montana	University of Montana Professor
21. Dr. John Goodrich	Russia		Tigers
22. Dr. Ullas Karanth	India		Tigers
23. Mr. Stephen Siebert & Jill Belsky	USA		Researchers in Bhutanese Forestry Practices, Agroforestry
24. Dekila Chungyalpa	USA	World Wildlife Fund	WWF
25. Ronald Coleman	USA	Thimphu	Director of GNH conference, December 2009
26. Thinley Namgye	Bhutan	National Environment Commission	Climate Change

27. Tiger Sangay	Bhutan	Ugyen Wangchuck Institute for Conservation of Environment	Tigers
28. Rebecca Pradhan	Bhutan	Royal Society for Protection of Nature	Ecologist
Others			
1. Lopen Tashi Galay	Bhutan	Central Monastic Body (Dratshang)	Director of Health and Sanitation Program of the Dratshang
2. Edward Cook	USA	University	PI on Climate and Society In Bhutan: Helping a Buddhist Kingdom Cope With Future Climatic Change And Its Impact On Natural Resources
3. Nancy Shea	USA	nhshea@bresnan.net	USA Representative for Bhutan Poverty Project
4. Tashi and Lobsang Rabgay	Bhutan	Machik Foundation	Machik Foundation