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Druk Gyalpo Ugyen Wangchuck's Twenty Points Proposal to the British India to Modernise Bhutan

*Contributed by Tshering Tashi**

In 1921, His Majesty Ugyen Wangchuck the first Druk Gyalpo, wrote a letter to Rufus Isaacs, the Earl of Reading, who was then the Governor-General and Viceroy of India, in which he submitted a 20 points proposal to modernize Bhutan, and requested for Rs 1,30,000.00

On 18 November, Major F.M Bailey, the British Political Officer based in Gangtok, Skkim, wrote a favourable cover letter to his Secretary in Delhi, advising his government to act favourably on the grounds that it would help enhance its trade relations and that the assistance would be of mutual benefit. In paragraph 13 of his letter No. 47-T.C. of 25 January 1910, Mr. Bell writes about informing Ugyen Wangchuck of the willingness of the Government of India to assist him in developing the resources of Bhutan. This was done in obedience to the instructions contained in Foreign Department letter No. 97 E.B.C. of 11 October 1909.

This letter is being revealed to the public for the first time. Written in Dzongkha and translated into English, the letter sent from Bumthang is dated 5 September 1921.

* Tashi Tshering is a freelance writer and researcher based in Thimphu.

To His Excellency the Viceroy of India.

(Through the political Officer, Gangtok, Sikkim)

1. I take the liberty of asking Your Excellency's warm interest in the welfare of my country of Bhutan and laying before you certain proposals for its development in the hope that I may gain help from the Government of India towards their realization.
2. Bhutan is at present a poor and a backward country. Until recent years it suffered frequently from internal struggles which depopulated and ruined the country. Now that peaceful times have come and a stable hereditary Government has been established under the protection of the British Government, there has arisen an ever-growing desires for closer political and trade relations with India for the progress on the lines of civilized countries.
3. The first great barrier to be removed is the ignorance of my people. Until seven years ago, there was, outside of the monasteries, no knowledge of reading or writing among the people. In 1914 I sent 45 boys to be taught at Kalimpong (with the summer session at Haa in Bhutan) and in 1915 started a School at Pumthang [Bumthang] in which Hindi and English are taught. Of the 45 boys who went to Kalimpong, 33 have passed the Middle School standard and 4 of them will appear for the University Entrance examination in 18 months time. The boys have proved themselves to be apt pupils. At Pumthang [Bumthang] School 8 of the pupils have reached the 6th standard.

Twenty Points Proposal to Modernise Bhutan

4. The problem now faced is how best to utilize these lads for the development of Bhutan. A number of openings suggest themselves to me as urgent. There is a great need of medical knowledge to relieve suffering, to deal with these epidemics which have frequently decimated the population and to help towards a lower general mortality. I should therefore, like to see at least two of the lads trained as Doctors.
5. The prosperity of Bhutan depends largely in its animal and for their care and protection, it would be well that two of the lads should pass through a Veterinary College. During the last few years the cattle in large tracts of the country were practically exterminated by rinderpest.
6. For initiating a system of general education among the people at large it is desirable that a few of the lads should get a thorough training in the science and methods of training and for this 6 lads might be deputed who would afterwards take charge of a Training School for primary Teachers in Bhutan and conduct schools at various centres in the country.
7. The real basis of prosperity of the country is agriculture (including stock raising and dairying) and practically the whole population is engaged in it. It is in a backward state. I believe that if the modern methods, which I have heard are employed in many other countries, were adopted, much could be done to improve the crops and the animals (cattle, sheep, goats, pigs, horses and mules). If three of the lads could get a scientific and practical course of training in agriculture and dairying (including cheese making),

they might do much to introduce improved methods and to teach people through demonstration farms.

8. There is weaving in a primitive style of cotton and wool and eri silk in the country and there is also the manufacturer, on a small scale of art cloths which have been admired beyond Bhutan. Two lads could be profitably be trained in improve methods of weaving and in developing the indigenous art fabrics. Another might learn tanning of skins which is now done in the most primitive fashion.
9. Bhutan has great forest which if worked on good lines should in time produce considerable revenue to the country and be a benefit to India. At present they product hardly any revenue and those adjoining the plains of India have been largely destroyed through the absence of supervision and ignorance of the proper methods of conservation. I should like to have 4 of the lads trained at a School of Forestry.
10. There are Minerals in Bhutan but hitherto there has been no careful survey and no successful attempt has been made to deal with them on a large scale. If one of the lads were trained in mining so that he could be able to conduct a thorough mineral survey of the country, there might be much fruit from his labours.
11. One great obstacle to the development of the country is the absence of good roads. It takes a coolie with a burden from 7 to 10 days to struggle up from the south frontier to the healthy zone in middle and northern Bhutan. The journey from the east to west in that same zone takes about 21 days, over a succession of valleys and the high mountain ridges

Twenty Points Proposal to Modernise Bhutan

which separate them. To prepare for the provision of better communication, two of the lads might go to college to be trained as Civil Engineers, and it would be well if they too could get a knowledge of hydro-electricity. In the great rivers of Bhutan which flow from the snowy ranges down to the plains – the Toorsa, Rydak, Sunkos, and Manas – as well as in the smaller rivers, there is unlimited power to be utilized for the development of the country and for the use of industries in India, and it would be of first important to India as well as Bhutan to have men able to take advantage of this power.

12. A Printing is a necessity for carrying on the organization of the country under the new conditions and of supplying the necessary educational apparatus. Two lads might be trained to run a press.
13. The above represent what seems to me to be the most pressing outlets for the lads who have been so far educated and I believe that they could do a great work in organising a new era in Bhutan. My petition to Your Excellency is that you should generously provide for their training in India. You have their institution for their training and if you will graciously undertake this great work for us, will you confer on me personally and on my country a great boon.
14. We ourselves are able to do little. Bhutan through rice, in promise for the future is now very poor. There is little or no money in the country. We are still in the shortage of barter. Revenue is paid in kind. Unless we get your help at the present stage, Bhutan must remain in its backward state for many years to come.

15. If you will undertake this work for us, I would make this request that our Bhutanese lads during their time of training should be kept as simple as possible for if they are pampered there is the danger that they would be unfitted for the simple life of their native land on their return.

16. I do not know exactly what will be the exact cost of the training of the 25 lads I have suggested. A rough estimate has been given to me as follows:-

1	To carry them on to the Entrance stage	Rs.10,000.00
2	To give them a University or Professional training	Rs. 10,000.00
3	To give a small outfit to enable them to make a start with their various departments in Bhutan:- e.g. outfits for two Hospitals and a Veterinary Dispensary; Plant for two Demonstration farms and Dairy; Equipment for weaving School, Tannery and Printing Press; Mining Survey and Civil Engineering apparatus; and Furnishing for Chief Schools	Rs. 65,000.00
	TOTAL	Rs. 130,000.00

17. If Your Excellency will meet the cost, I shall do my best to supply satisfactory lads for training. The cost would be spread over a considerable number of years- say from 7 to 10 years.

18. I have still another-and if possible still more important-petition to present Your Excellency. At present time Bhutan receives an annual subsidy of

Twenty Points Proposal to Modernise Bhutan

Rs. 1, 00,000.00 from the Government of India. This sum is by way of compensation for the Bengal and Assam Duar and the Kalimpong Sub-Division of the Darjeeling District annexed after the Bhutan war of 1865. I would respectfully suggest that the amount of the subsidy should now be increased. I would urge that the Rs. 1, 00,000.00 has much less value now than when the sum was fixed. It is I believe not unreasonable to plead that the subsidy should be at least trebled to make up for the great fall in the purchasing power of the rupee and to meet the growing demands of the State. For example, a large proportion of the subsidy is spent on imported cloth to cloth the officials and sepoy and now the cloth costs three times what it did seven years ago.

19. I also ask Your Excellency's consideration of the growing revenue received by the Indian Government for the rich Districts of the Dooars and Kalimpong in respect of which the subsidy was granted. I have no grudge against the Government because of the annexation. We now in Bhutan see that it was the result of our own ignorance and high handedness at a time when the country was torn by internal factions, and we have no legal claim to make. But I should be most grateful if the Indian Government could see its way to give to Bhutan some share of the prosperity of the land which formerly belonged to her in the shape of an increased subsidy and by doing so to help her make a fair start in a new career in conjunction with and under the protection of the British Government. I need hardly remain Your Excellency that the prosperity and stability of Bhutan are no small

importance to the welfare of the north-eastern frontier of India.

20. By undertaking the training of our first lads to be educated along modern lines and by giving them an equipment for beginning their work in Bhutan, Your Excellency will set us on the way towards a new and more hopeful national future. By increasing our subsidy, you will enable us to carry on the work which you will have begun and which will requires an ever-increasing expenditure until the various resultant enterprises themselves can produce their natural fruits.

Source: British Library (1922), File Number L/P&S/12/2225. P757, 1922, BHUTAN AFFAIRS.

A Brief History of Bhutan House in Kalimpong*

Khandu-Om Dorji³

Introduction

The Bhutan House in Kalimpong presently serves as the residence of Her Majesty, the Royal Grand Mother of Bhutan.¹ It is a significant historical structure of considerable political importance, representing the relationship between the British India and Bhutan from the late 17th to the early 20th century, which eventually evolved into the Indo-Bhutan friendship. Bhutan House was the residence of Gongzim Ugyen Dorji, a successful businessman and an accredited representative of the British India government. In the translation relating to the first meeting of Trongsa Penlop Gongsu Ugyen Wangchuck and Ugyen Dorji in Kurjey Lhakhang, Bumthang, the Zhabdung Jigme Chogyal recommended Ugyen Dorji to Mije² Ugyen Wangchuck, then the Trongsa Penlop, and he appointed him as Haa drungpa in 1898, and made him as his chief minister (Wangdi 1997: 3).

* This paper was written in partial fulfilment of the requirements of the Centre of Bhutan Studies Internship Programme in April 2002.

While growing up, I would come across bits and pieces of conversations about Bhutan House from family and friends alike, but never attached much importance till a family friend, Michael Vinding, shared the advantage of being part of this family history and having the opportunity to record it. I would like to thank him for his guidance. I humbly dedicate my small effort to Her Majesty the Royal Grandmother, who inspired me to work on this project and hope a more elaborate book would come out in the future.

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¹ Kalimpong was a trading centre on the frontiers of Sikkim, Tibet, and Bhutan in the 1800s.

² Mije means the Lord.

Limited literature has been found on Bhutan House and a few books do refer to the house as the residence of the Dorji family. The British gifted the estate in Kalimpong (comprising 18 acres of land) to Ugyen Dorji in return for his services. Ugyen Dorji was born in 1855 to Pala Gyaltzen and a lady from Tsendong in the Paro Valley (Aris 1994: 84). Ugyen Wangchuk became fond of Ugyen Dorji who was his second cousin and perhaps it was because of a familial relationship (second cousins) that he entrusted him with many trades and commissions. During this period, Ugyen Dorji facilitated the negotiations between Ugyen Wangchuck and the British India.

In 1910, Ugyen Dorji received the title of 'Raja' from the British Viceroy as a personal distinction for the valuable service he had offered during the Younghusband Expedition to Lhasa in 1903-1904 (Sinha: 2001: 28). At the same time, he was appointed 'The King's Chamberlain', taking the title of Gongzim,³ (Chamberlain to the Ruler), a hereditary position (Aris 1994: 102-103) which was equivalent to a senior minister.

In 1916, Gongzim Ugyen Dorji died in Kalimpong and his only son, Sonam Tobgye Dorji, took over his father's hereditary post as Gongzim and continued his required duties to the king. Due to his experience in assisting his father on many of his expeditions, the British also gave Sonam Tobgye the role of Bhutan Agent and inherited the British-India's 'Raja' title (Aris 1994:106).

In 1918, Sonam Tobgye Dorji married Rani Chuni Wangmo, the sister of the king of Sikkim. They have five children: his eldest son Jigme Palden who became Prime Minister of Bhutan; the second eldest, a daughter Tashi, who helped in the affairs of the Bhutan House; Kesang Choden, who

³ A title equivalent to a senior minister.

married the third King of Bhutan; Ugyen, a reincarnation of a high priest in Tibet; and Lhendup. His children were all born and brought up in Bhutan House and educated in the elite schools set up by the British within Darjeeling and Kalimpong.

The role the house played in its social and political environment correlates with the members involved in Bhutan House. This includes the workers, students, guests and family members who contributed to the symbolic structure that holds all sorts of meaning and history in each of their lives.

Different Names for Bhutan House

Bhutan House was bestowed several different names by the people who were associated with it. A letter written to Bhutan House His Holiness Thubten Gyatso (1876-1933) the 13th Dalai Lama states that he was invited to stay in Mi rgyur mngon par dg'a ba'i pho brang (The Place of Unchanging Supreme Joy) after spending three months in the newly-built house in 1912 as a guest of Ugyen Dorji and his sister Ayi⁴ Thubten Wangmo (Her Majesty the Queen Mother, Ashi Kezang Choden 2002:1). The locals in Kalimpong called it "Bhutan Durbar", meaning Bhutan Palace. However, in the 1960s the name was changed to "Bhutan House" to be politically correct for the environment and situation of that time. During the research, I discovered that there was a previous Bhutan House called 'Koti Homa', meaning "lower house" in Nepalese. The name was referred to as the "lower house", because it was located below the Gyongsar Gompa⁵ in Kalimpong where Ugyen Dorji's wife lived. It is believed that Ugyen Dorji's favourite white horse that saved his life on one

⁴ Ayi, lit., 'mother', is a honorific term for a lady.

⁵ Gyongsar Gompa (Jangsay Gompa) the oldest Bhutanese monastery in Kalimpong founded in 1692 (1680) by Shabdung Jigme Dakpa.

of his excursions was buried in the Koti Homa compound. His Holiness the 13th Dalai Lama's first stay with the family was in Koti Homa during his visit to Kalimpong. Today people referred to the lower house as the "Old Bhutan House" in English. When talking about the Bhutan House or residence of Ugyen Dorji, people refer to the present Bhutan House.

Bhutan House and Its Functions

Gongzim Ugyen Dorji settled in Kalimpong, then the emerging trading mart in the British territory. His trading in India and Tibet during the end of the nineteenth century allowed him to make important connections with the British India. The British viceroy appointed Ugyen Dorji as Bhutan Agent and a year later, in 1898, he acted "as a go-between" with the Tibetans and the British as a part of their continuing efforts to secure trade concessions (Aris 1994: 86). The duties of Bhutan House were connected with the foreign relations between British and Bhutan. It was then, that Ugyen Dorji began his small projects to help the development of the country. One of his most successful projects and closest to his heart was the introduction of education in Bhutan. Bhutan House looked after the first batch of boys to be educated in Kalimpong. Bhutan House was probably the "best known address in town" as the house entertained many guests from all over because of its ideal location and due to the important political and social roles its members played in the community (Dr Wangyal).

Trading Centre

Kalimpong was a booming trade centre on the frontiers of Sikkim, Tibet and Bhutan, before China took over Tibet. Gongzim Ugyen Dorji's business agendas were settled in the Kalimpong area, where his personal business of horse-trading was established. The old Bhutan House (Lower Koti) had beautiful stables called the "Raja Koti Stables". He supplied a

lot of animals to the British Army. The “mule trains” from Tibet to Kalimpong would pass by the road in front of Bhutan House (Dasho Paljor Dorji). It was a big business those days as mules and horses were the chief mode of transport.

Bhutan House held a significant role for the community in Kalimpong as “people in the community came daily from all over the district to call on my grandfather, [Sonam Tobgye], for justice, problems and business” (Paljor Dorji). Dr Wangyal’s article, titled “Raja Sonam Tobgay Dorji” relates how the majority of Kalimpong residents petitioned Sonam Tobgay Dorji to represent them in the elections leading to the Provincial Assembly of Bengal, which he politely declined (the “honour bestowed”) because of his nationality as a Bhutanese.

Sonam Tobgye Dorji, apart from being a businessman, was an active philanthropist. Evidence of his contributions are marked in Kalimpong, such as the popular “hatt bazaar” named after him and this owes much of its functioning existence to the Raja Sab. The Mela⁶ Ground, once a rugged, undersized field where hockey and football games took place, was levelled and increased in size by the collective efforts of Sonam Tobgye and Rai Saheb Bhimbahadur Pradhan. Sonam Tobgye was known to be an avid fan of football, always trying to promote sports and constantly bringing in outside teams, as well as sponsoring local teams to different areas in North Bengal, exposing them to new techniques and strategies of the game.

Bhutan House Administration

Due to the increasing number in southern Bhutan of Nepalese immigrants, the responsibility was given to the Bhutan House to monitor the situation in the south. The

⁶ Mela means fair in Hindi.

headquarters for the Southern Bhutanese administration was based in Bhutan House. All affairs that could not be solved by the “babus”⁷ in Southern Bhutan were referred to Kalimpong, for Sonam Tobgye to solve on behalf of His Majesty the Second King Jigme Wangchuck.

In 1935, during His Majesty Jigme Wangchuck’s trip to India, it was believed that Sonam Tobgye began a “systematic review of social conditions, administrative practices and judicial proceedings,” which brought about new reform in the Kingdom (Aris 1994: 135). Taxes were paid in various forms such as firewood, hay, rice, and woven cloth, depending on the district of which the Bhutan House collected for the Second King of Bhutan. This form of taxation soon ceased.

External Affairs

Bhutan House was very much involved with the external affairs of the country because of the relations initiated between the British Raj and Bhutan through Ugyen Dorji and His Majesty the First Druk Gyalpo Ugyen Wangchuck. His Majesty Ugyen Wangchuck recognised the advantages of befriending the British in the terms of foreign policy and in turn acted as a mediator for the Tibetans and the British during Younghusband’s affairs in 1904 (Williamson 1986:17).

“The Druk Gyalpo, Sir Ugyen Wangchuck left the entire administration of the western Bhutan and Indo-Bhutanese relations in the able hands of his trusted ally, Ugyen Dorji” (Sinha 2001: 28). The “liaison” between the two governments were maintained through the political officer of Sikkim and Ugyen Dorji and his son Sonam Tobgye residing in Kalimpong. Because of these factors Bhutan and British India’s relations flourished in the late 1800s and even

⁷ All students who returned from studies in Kalimpong to their respective villages were jovially referred to as Babus as stated by Achu of Haa (aged 87).

developed stronger ties through the years. The fluency of the Dorjis in the English language was most advantageous for them to maintain relations with their neighbours (Rustomji 1987: 19). All communication and external political affairs were passed through the Bhutan House including the coordination of all visits made to Bhutan as well as those of Bhutanese dignitaries visiting India.

It was Sonam Tobgye who arranged the only trip that His Majesty the Second King ever made to India. In 1934, His Majesty Jigme Dorji Wangchuck made a two-month visit to Calcutta. Sonam Tobgye prepared the accommodations for the king by renting a large property at 42, Chowringhee Road. In preparation for the visit, Rani Chuni and Margaret (political officer's wife) went down to Calcutta to buy furniture and fittings for the unfurnished house and Sonam Tobgye busied himself, building bungalows for the rest of the entourage of about 200 people accompanying the royal family (Williamson 1987: 175).

Sonam Tobgye's contacts in India became valuable during this time of transition in 1947, as the British were leaving India. The rulers of the princely states were advised to join their successor states of India and Pakistan. Wishing to avoid the fatality of becoming an Indian state, pressure on Bhutan escalated, as the small kingdom tried to maintain independence. In 1949, a treaty was signed at Darjeeling between the king of Bhutan and the Governor-General of India, securing a "quasi-international status" with India (Sinha 2001:78).

Social Roles

Although the Dorji family was immersed in a capitalistic environment where the family was involved in trade and investment, the men served as government's agents first for the British and then for its foreign relations with India. Bhutan House also held social importance in Kalimpong.

Therefore, women members of the family not only held familial roles but had to function to reinforce the status of the family and the positions of their husbands. They did this by attending and hosting social functions such as tea parties, picnics and dinners. One of the members of the family recalls having so many friends, family and important dignitaries passing through Kalimpong, that “every second day was a party”. Surprisingly, many of the Everest expeditions were flagged off from the Bhutan House premises organised by Dr Graham and Sonam Tobgye (Dr Wangyal).

After Ugyen Dorji’s death in 1916, Sonam Tobgye continued his post in Kalimpong and helped the king maintain his connections with the British by organizing a “steady flow of British guests (Aris 1994: 130). Sir Charles Bell⁸ mentions Bhutan House briefly in his book, *Portrait of a Dalai Lama*, mentioning his visit there with his wife to see off the 13th Dalai Lama, when he was leaving Kalimpong for Tibet. He writes the following:

My wife and I set out for the Bhutan Residency, which, the Agent for the government of Bhutan (Kazi Ugyen), himself a devout Buddhist, had placed at the Dalai’s disposal during these few months’ stay in Kalimpong [June, 1912] (Bell 1998:131).

Family members from the Sikkim Royal family would visit “for weekends”, as well as the children who studied in the Kalimpong and Darjeeling area. “We had functions galore!” states one of the members of the family who remembers some of the most memorable celebrations recorded in Kalimpong. The biggest one was when the crown prince of Bhutan was born. The wedding of Rani Chuni Dorji and Sonam Tobgye was a grand affair for the Bhutan House as the only son of Ugyen Dorji was getting married to the princess of Sikkim. The marriage of Jigme Palden the eldest son of Sonam Tobgye to a Tibetan aristocrat Tsering Yangzom (Tess-la) was also a

⁸ Political Officer of Sikkim, Bhutan, and Tibet.

celebration to remember. Among all the events, the most happening was the annual Losar celebrations.

Celebrations

Losar⁹ was one of the biggest family celebrations for Bhutan House. The Royal Grandmother continues to spend her Losar in Bhutan House. Ashi Tashi remembers how her mother worked hard in preparation for the event as she organized the food and the arrangements and invitations. During this time, the people of the Darjeeling district would come and pay their respects to Sonam Tobgye and Rani Dorji.

The accounts of this event from the Royal Grandmother and Ashi Tashi reflect the diverse culture the family was exposed to. The Royal Grandmother recollects her fond memories of sharing her Losar experience at home: “In Bhutan House, in Kalimpong my parents would give grand Losar parties with lavish Chinese banquets, served in beautiful silverware. There were fantastic Chinese lawn dances¹⁰ to celebrate the New Year and sometimes Ashi Lhamo dances (Tibetan dances)” including spectacular fireworks, it was an occasion to remember. The whole of Kalimpong would come to watch the Bhutan House celebrations, especially all the classic dances that told tales of old legends.

Bhutan House Lhakhang¹¹ held sacred annual pujas and Losar prayers for the flourishing of Buddhism. The official Nechung oracle¹² was held in Bhutan House, Lhakhang during the stay of the 14th Dalai Lama. Many precious relics and gifts from both the 13th and 14th Dalai Lama still remain in Bhutan House. Rani Chuni, also known as “Anyola”, within

⁹ The celebration of the lunar calendar New Year.

¹⁰ The traditional Chinese mask and dragon dance.

¹¹ The alter room where religious prayers and pujas are preformed

¹² The official oracle of the Tibetan government.

the Bhutan House walls, was very religious and many of these sacred relics were placed in various temples around Bhutan.

Before his Holiness the 13th Dalai Lama left Bhutan House for Tibet he gifted his large, exquisite, gilded carved wooden Choeshom¹³ filled with the most precious and sacred status to Ugyen Dorji and his sister Ayi Thubten Wangmo. “He prayed deeply over each statue before placing them on the alter himself” (Her Majesty Ashi Kesang Choden Wangchuck, 2001:1).

For all its social and political roles, Bhutan House would always serve as the residence of the Dorji family. The left wing of Bhutan House was the office of Sonam Tobgye and his staff. The family and guests used the rest of the house.

Education

Ugyen Dorji had two very close friends, Dr Graham and Dr Sutherland, educationists and founders of the well-known Dr Graham’s Homes School in Kalimpong. Dr Graham and Dr Sutherland gave a lot of helpful advice on the education of our Bhutanese boys and so Ugyen Dorji even took them to meet with His Majesty the Druk Gyalpo Ugyen Wangchuck in Bumthang.

In 1914, supported by His Majesty Ugyen Wanchuck, Ugyen Dorji took forty-six boys from Bhutan and admitted them in a Scottish mission school in Kalimpong called Dr Graham’s School.¹⁴ Ugyen Dorji supported most of them privately from his own personal resources. In the same year, he started a school in Haa. In 1915 a school was founded in the king’s palace in Bumthang.

¹³ Buddhist altar.

¹⁴ The majority of schools in India were set up by the British missionaries.

During Sonam Tobgye's time, the soldiers and the school children lived in the red L-shaped building within Bhutan House compound. The investment in education of these Bhutanese students brought about "teachers, sub-assistant surgeons, trainers, forest rangers, mining engineers, and vets" (Aris 1994: 104). The annual report of F.M. Bailey (1921-22), the former political officer of Sikkim, records the Maharaja's request to the Viceroy of India for financial assistance in training Bhutanese boys. In 1923, Rs 49,629 was granted for the education of the Bhutanese children (Sinha 2001:192). In the effort to inculcate the values of education in political leaders and local people, King Jigme Dorji Wangchuck (the third king of Bhutan) moved on to introduce English medium schools in Bhutan. Bhutan House was a part of the education department for a short period of time between 1956-1957 due to its efforts to promote educational development in 1955 when the government of India decided to help educate 30 students from Bhutan in English medium schools in India.

The Prime Minister Jigme Palden Dorji, following His Majesty Jigme Wangchuck's vision concentrated on the development of education in Bhutan. In 1962 during one of his visits to Darjeeling, the Prime Minister met Father Mackey, a Jesuit Brother in St Joseph's School, who had been ordered to leave India and so he brought him to Bhutan to help establish the Kanglung School in Trashigang. Father Mackey became a significant "pillar" of the development of education in Bhutan (Sinha 2001: 193). The Prime Minister Jigme Palden Dorji also brought the Don Bosco Fathers to establish technical education in Bhutan.

Who was responsible for the Household?

Within the household of Ugyen Dorji, a key figure of Bhutan House was Ayi Thubten Wangmo, sister of Ugyen Dorji, who looked after the household affairs of Bhutan House. "She was a very powerful member of the family in Bhutan House" and

ran the household like both the father and mother of the family and “before she died she handed over the entire keys of the house and everything with it to Rani Chuni Dorji”, passing responsibility to the next of kin. Rani Chuni had come as a bride, marrying into the family in 1918. Marriage into the household and the inheritance of keys by Rani Chuni gave her the responsibility to become the new household figure of Bhutan House.

Rani Chuni took charge of Bhutan house till her death in 1994, passing the keys on to her daughter Ashi Kesang Choden Wangchuck, which was most appropriate, as the late Prime Minister and his wife Tsering Yangzom (Tess-la) had moved into another house in Kalimpong called Tashiding.

Ashi Tashi, the eldest daughter, on the other hand took on the official responsibilities in her father’s office as his personal assistant and became involved in the political affairs of Bhutan, rather than taking on the household responsibilities. She became a custodian of knowledge for the affairs of the Bhutan House. Her participation in the office was due to her educational background that was somewhat more advanced than most of the educated workers in Bhutan.

Rani Chuni was most concerned, as a very religious person, of keeping the Lhakhang where the 13th Dalai Lama’s throne was placed. Therefore, she felt that the only person who could look after the Lhakhang was Ashi Kesang Choden, who most probably had the finances and background to support the house. It was a unanimous decision by all members of the family that the house would be passed down to Ashi Kesang Choden who is the Royal Grandmother of Bhutan.

Bhutan House Today

The inviting yellow gate with a well manicured driveway leads to the front of the Victorian architectural structure, Bhutan House. The property is on a large area of land in Kalimpong,

A Brief History of Bhutan House in Kalimpong

with various kinds of subtropical trees, plants and indigenous Himalayan flowers occupy the property. Ayi Thubten Wangmo's ashes are kept in a small stupa enamoured by a pink rose bush at her cremation site.

Tucked away between the clusters of deep pink azalea bushes on the front lawn, stands a white chorten commemorating the late Rani Chuni.

At the doorstep, one is greeted by two adjoining wooden staircases made of dark wood leading to the first floor. On the left from the entrance is the sitting room where guests are usually entertained. The room has a bay window and seats furnished with chase *pangkhep*¹⁵ upholstery. On the walls hang old pictures of family, close friends and beautiful painted *thangkas*.¹⁶ An enclosed glass cabinet carries various porcelain objects d'art collected and gifted to the family. Family pictures were always taken in the other corner of the room with a seating area. Adjoining the main sitting room is the dinning room. Dasho Paljor Dorji, the eldest son of the late Jigme Palden Dorji, recalls that as a child, it was mandatory to eat every meal with the family in this dinning room. A picture of Ugyen Dorji and Sonam Tobgye hangs prominently above the dinning room window.

The upstairs rooms are the bedrooms and the family altar room in which the throne of the 13th Dalai Lama rests, along with a golden statue of him. Other precious relics of his are contained in this room with a beautiful *choesham* (the only other like it remains in the Dalai Lama's room in the Potala in Lhasa). Gifts of statues and other precious items from His Majesty the First King Ugyen Wangchuck remains in this room. But the most elaborate and fascinating room of all is the room of the late Rani Chuni, wife of Sonam Tobgye and

¹⁵ Old Bhutanese woven material.

¹⁶ Buddhist religious paintings.

sister of the late Chogyal of Sikkim. It contains a choesham from Tibet gifted by the 13th Dalai Lama. The room holds many pictures and various books and is furnished in traditional Bhutanese style, using beautiful carved *chodems*¹⁷ and woven material to decorate the room. The Bhutan House is a gold mine of artefacts that hold unique stories.

Conclusion

Bhutan House was a residence of the Dorjis, a quasi-liaison office for Bhutan's external relations, and the headquarters for the southern Bhutan administration. The house attracted many different people for various reasons ranging from students, family, friends, to political officers and rulers in the region and played many different roles through the years.

The residence belonged to Ugyen Dorji, and was passed down to Sonam Tobgye and Rani Chuni Wangmo and was finally bequeathed to Her Majesty Ashi Kesang Choden (The Royal Grandmother of Bhutan). There does not seem to be a distinct pattern or form of a relationship of passing down of the estate from one generation to another, but there has been a change of roles of Bhutan House, which has been determined by change in the political structure of the area.

The British moved out of India after independence in 1947. The political scenario of Bhutan was changing and the building of roads contributed to the shifting of the capital to its present location, Thimphu. The headquarters for external affairs were moved to Calcutta (now Kolkata) and by 1964 His Majesty King Jigme Dorji Wangchuck took over the administration of southern Bhutan, moving the office to Phuentsoling, which was an upcoming border town at the time.

¹⁷ Bhutanese/ Tibetan style tables.

A Brief History of Bhutan House in Kalimpong

After the death of Rani Chuni Dorji in 1994, people stopped living there full time. Her Majesty, the Royal Grandmother Ashi Kesang Choden and other members of the family make annual visits here for *losar* and other significant occasions. Today, the house stands as the residential house of the Royal Grandmother of Bhutan.

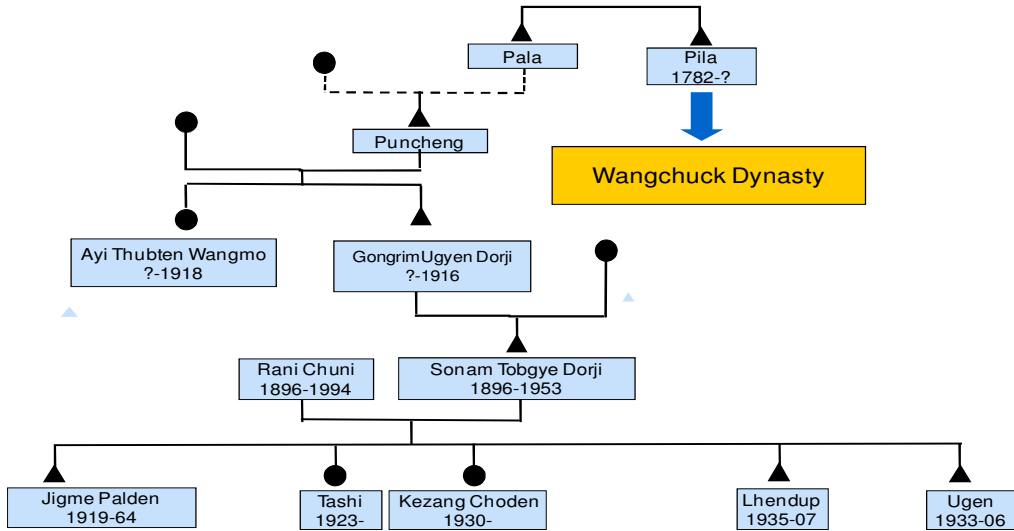
The Bhutan House is imbued with warmth and great beauty and serenity of the memories of the people who lived there. The lhakang is filled with the love and blessing bestowed by His Holiness the 13th Dalai Lama and our His Holiness Late Dilgo Kheyntse Rimpoche who came every year. My son, His Majesty the Fourth Druk Gyalpo, Jigme Singye Wangchuck has advised that Bhutan House should be cherished in prosperity as a memorial to the Dorji Family (Ugyen Dorji, Ayi Thubten Wangmo, Sonam Tobgye and Rani Chuni). (Royal Grandmother, Ashi Keszang Choden Wangchuck, 2002).

My paper serves as a documentation to celebrate the efforts of Bhutan House and the people who worked and lived there, allowing their contributions to be remembered and recorded. Bhutan House was the place where support of education was born and where Bhutan was recognized as an independent nation with strong friendships being built with the British and independent India. Through its many phases, we must realize that the efforts of Bhutan House would have never have happened without the support of our benevolent kings and the people of Bhutan, His Majesty Ugyen Wangchuck; His Majesty Jigme Wangchuck; His Majesty Jigme Dorji Wangchuck; and His Majesty Jigme Singye Wangchuck. It is through the collaboration and vision of our leaders that our place as a nation has been secured. The house represents a symbol of development and vision of our forefathers, and I hope that it is through the same efforts and spirit that we may be able to grow to meet our goal of Gross National Happiness.

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The Pala Lineage



Photographs



Photo 01: Gongzim Ugyen Dorji; Courtesy of Ashi Kesang Choden Wangchuck

Vulnerable Medicinal Plants and the Risk Factors



Photo 02: Gongzim Sonam Tobgye Dorji.



Photo 03: The 13th Dalai Lama. Courtesy of Ashi Kesang Choden Wangchuck.



Photo 04: The 13th Dalai Lama's throne in Bhutan House



Photo 05: The Statue of the 13th Dalai Lama in Bhutan House



Photo 06: The front view of Bhutan House



Photo 07: Aji Wangmo's cremation site.

Vulnerable Medicinal Plants and the Risk Factors



Photo 08: Staircase.



Figure 09: Sitting room.



Figure 10: Sitting room



Figure 11: Porcelain cups in glass



Figure 12: Inside the altar room

The Accounts of Choje Drak and Babron Tharpaling,
Bumthang

བུམ་ཐང་ཚོས་བྲག་གནས་དགོན་དང་བབ་རོན་ཐར་པ་སྤྱིང་གི་ལོ་རྒྱུས་ནི།

༥ རྩོན་དུས་རབས་བརྒྱད་པར་གྱ་རུ་རིན་པོ་ཆེ་བོད་གངས་ཅན་དང་འབྲུག་ཡུལ་སོགས་
སྐྱུ་དངོས་དང་རྩུ་འཕྲུལ་གྱིས་བྱོན་ཏེ་གངས་བྲག་མཚོ་གསུམ་གྱི་མཚོན་ས་གཞི་ཐམས་
ཅད་རྟ་མིག་ཅོམ་མ་ལུས་པ་ཞབས་གྱིས་བཅགས་ཤིང་ཚོས་རོར་གྱི་གཏེར་ཁ་གངས་
ལས་འདས་པ་སྐྱ་བར་མཛད་དེ་བྱིན་གྱིས་བསྐྱབས་པའི་གནས་བསམ་གྱིས་མི་ཁྲབ་པ་
བཞུགས་པའི་ཡ་གྲུལ་དུ་གྱུར་པ། ཚོས་རྗེ་བྲག་འདི་ཉིད་བྱོགས་བཞིའི་བྲག་གི་ཡ་གྲུལ་
ཏེ་བྲག་རི་ཚོས་གྱི་པོ་སྟེ་བཙུགས་པའི་ལོགས་ལ་གྱ་རུ་དངོས་སུ་བཞུགས་པའི་བཞུགས་
ཁྲི་དང་དུང་དཀར་རང་བྱོན་གསལ་ཞིང་སྐྱན་བཅུན་ཆེན་མོ་ཞིང་སྐྱོང་གི་དབང་མོ་རྗེ་
གཡུ་སྐྱོན་མོའི་པོ་བྲང། བྲག་མེ་ལོང་འབྲ་བའི་ཕྱོ་མོར་གྱ་རུ་རིན་པོ་ཆེ་སྐྱིན་ཡུལ་དུ་
འཕུར་ནས་བྱོན་པའི་སྐྱབས་གྱི་ཞབས་རྗེས་སྐྱ་གང་གི་ཚད་ཅན་དང་རྗེ་རྗེའི་བཞུགས་
ཁྲི་ཁར་རྗེ་རྗེའོ་ལོད་གྱི་སྐྱར་བཞེངས་ཏེ་སྐྱ་གྲོ་སྟག་ཚང་ནས་བྱོན་པ་གྱ་རུ་རི་ཆེབས་པ་

སྟག་གྲི་ཞབས་རྗེས་རྣམས་གསལ་བར་བཞུགས་ཡོད།

དེ་ལྟར་ཚོས་རྗེ་བྲག་ལ་ བྱ་རུས་བྱིན་བསྐྱབས་མཛད་པའི་གནས་ རྟེན་བྲག་རི་རྣམས་
 བྱིན་སྐྱབས་ཀྱི་ཡུང་པོར་བཞུགས་པ་དེར་ དུས་རབས་བཅུ་གཉིས་པར་ དཔལ་ལྷན་
 འབྲུག་པའི་བསྟན་པའི་རྒྱ་ལོ་ ཚོས་རྗེ་འགོ་བའི་མགོན་པོ་གཙུག་པ་རྒྱས་རས་ཡེ་ཤེས་
 རོ་རྗེ་དང་ དཔོན་རས་དར་མ་སོ་རྗེ་འི་ སློབ་མའི་སློབ་པོ་ལོ་རས་བྲགས་པ་དབང་ལྷུག་གིས་
 བུམ་ཐང་དུ་བྱོན་ཏེ་ གནས་རི་འདྲིར་སྐྱབ་པ་མཛད་ནས་ སྐྱབ་པའི་སྡེ་ཁྲི་ཚོ་གཉིས་ཅམ་བྱུང་
 སྟེ་ འབྲུག་པ་བཀའ་བརྒྱད་པའི་ སྐབ་ཐོབ་ཀྱི་ཚོར་བརྟོན་པའི་གནས་སྡེ་བྱུང་པ་ལ་ བརྟེན་
 ཚོས་རྗེ་བྲག་ཞེས་བྲགས་པའི་ཁྲུངས་དེ་ལྟར་ཡིན།

བུམ་ཐང་ཐར་པ་གླིང་གི་དཔོན་པ་དེ་ཡང་ ཚོས་བྲག་གི་གནས་དཔོན་དང་ ལུང་དུ་འབྲེལ་
 བ་ དུས་རབས་བཅུ་བཞི་པར་(རབ་བྱུང་དྲུག་པའི་ནང་) ཀུན་མཁྱེན་ཚོས་ཀྱི་རྒྱལ་པོ་
 ལྟོང་ཚེན་རབ་འབྲམས་ཀྱིས་ འབྲུག་ཡུལ་དུ་བྱོན་ཏེ་ ཐར་པ་གླིང་གི་དབུས་ འོད་གསལ་
 རོ་རྗེ་སྒྲིང་པོའི་བསྟན་པ་ ལྷབ་བདལ་དུ་སྡེལ་བའི་གདན་ས་གཙོ་བོ་ བུམ་ཐང་བབ་

རོན་ཐར་པ་སླིང་དུ་མཛོད་དེ་ འོད་གསལ་ཐེག་པའི་ཡང་ཕྱེ་ སླིང་ཐིག་གི་བསྟན་པའི་ རྒྱལ་
 མཚན་འཛིན་པའི་སློབ་མ་ གྲངས་ལས་བརྒྱལ་བ་ ཐར་པའི་གོ་འཕང་ལ་ ཚེ་གཅིག་ལ་
 བཀོད་པར་མཛོད་པ་ལ་བརྟེན་ ཐར་པ་སླིང་ཞེས་གྲགས་པ་ དོན་ལྡན་གྱི་མཚན་དོན་
 མཚུངས་པའི་དགོན་གནས་ ཐར་པ་སླིང་གི་བྱང་ཤར་ སེངྒེའི་བྲག་གི་ལྷོ་སྤྲེལ་ས་
 ནས་ རིག་འཛིན་ཆེན་པོ་ གཏེར་བཏོན་པར་སླིང་པས་ གླ་མ་གུ་རུ་བྲག་པོའི་སྐུ་དང་ དེའི་
 རྒྱབ་སློར་ གཏེར་གནས་དང་། བབ་རོན་ཐར་པ་སླིང་གི་ཚོགས་ཁང་གི་ཁང་ཤུལ་ཕྱིག་
 གསེབ་ནས་ ཀུན་མཁུན་སློང་ཆེན་པས་སྤྲས་པའི་ དགོངས་འདུས་ཚོས་མཚན་རྣམས་
 པར་སླིང་པས་ གཏེར་ནས་བཞེས་པའི་ཤུལ་ གཏེར་གནས་ཀྱི་མཚོན་པ་དང་གཞན་
 ཡང་གནས་དགོན་དེ་ཡི་གཡས་གཡོན་དུ་ བྲག་ལྷག་སྤར་གྱུ་བ་ཐོབ་རྣམས་བཞུགས་པའི་
 ཤུལ་ རྒྱད་པར་དུ་འཕགས་པ་མང་དུ་ཡོད།

ཚོས་བྲག་དགོན་པ་ སྤར་གཞུང་སྤྲང་ཐང་གྲུ་ཚང་ནས་ བདག་འཛིན་མཛོད་དེ་ ཚོས་
 བྲག་གླ་མ་ཞེས་ གླ་ཆེན་བཞེའི་གྲལ་ གཅིག་ཚོས་བྲག་གླ་མ་ཡིན་འདུག། བར་སྐབས་
 གཞུང་གྲུ་ཚང་གིས་ ཀྲོང་སར་གྲུ་ཚང་ནས་ ཚོས་བྲག་གླ་མ་བསྐོས་ཚོག་པའི་དབང་ཆ་

གནང་བར་བརྟེན་ དུལ་ལེ་བར་ ཚོས་བྲག་དགོན་པ་བདག་འཛིན་དང་ ཚོས་བྲག་སྐྱམ་
གྲོང་སར་རབ་སྐྱེ་ནས་བསྐྱོས་ཏེ་ དགོན་གནས་མ་སྟོང་ཚམ་ཡོད།

ཐར་པ་སྤིང་དགོན་པ་ནི་ ཀུན་མཁུན་ཆེན་པོའི་སྐབས་ དར་རྒྱས་བྱུང་ཡོད་ཀྱང་ བར་
སྐབས་ཉམས་ཆག་གིས་ མིང་ཚམ་ལས་མེད་པར་ དུས་རབས་བརྟུན་ལུ་བར་ འབྲུག་
རྒྱལ་དང་པ་ཨོ་རྒྱན་དབང་ལྷག་དང་ སྐབས་དབང་རྟོགས་ལྡན་ལྡུ་མི་ མཚོད་ཡོན་རྣམ་
གཉིས་ཀྱི་སྐབས་ སྐབས་ལྷ་ཀུན་བཙུགས་ གཙུག་ལག་ཁང་བཞེངས། དེའི་རྗེས་སུ་ དགོ་
བཤེས་ཀུན་སྟོབས་ལྷོན་ཏེ་ གཞུང་ཆེན་གྱི་བཤད་ལྷ་བཙུགས་གནང་། དེའི་རྗེས་སུ་ དགོ་
བཤེས་བསྟན་པ་རིན་ཆེན་ལྷོན་ཏེ་ དགོ་འདུན་གྱི་སྤེ་དང་ གཞུང་ཆེན་ཀུན་གྱི་བཤད་ལྷ་
བཙུགས་ཏེ་ དཀར་རྩིང་ལྷུང་འབྲེལ་གྱི་བསྟན་པའི་འབྲུང་ཁུངས་སུ་སྐྱུར་པ་དེལ་ ལྷ་
ཚང་གི་སྐྱོབ་སྐྱོབ་སྐྱོབ་མོང་ནས་ གསོལ་བ་བཏབ་པ་བཞེན་ དབུ་འཛིན་སྐྱམ་དགོ་བའི་
བཤེས་གཉེན་ཆེན་པོ་ ཨོ་རྒྱན་བསྟན་འཛིན་འོད་ཟེར་རམ་ ཡོངས་གྲགས་གནག་མཛོད་
ལར་གྲགས་པས་མཛོད་དེ་བཞུགས་བཞེན་པ་ལ་ སྤྱི་ལོ་༡༧༩༣ལོར་ ཚོས་རྒྱལ་
འཛིགས་མེད་སོངླེ་ཞབས་ནས་ འཚོ་བ་མཐུན་རྒྱུན་ཡང་ རྫོང་གཞི་ཁག་གི་ ལྷ་ཚང་དང་

ལྷན་པར་མེད་པ་ གཞུང་ཕོགས་མཉམ་པར་འཕྲོབ་རྒྱུར་བཀྲིན་བསྐྱེད་ས་ཏེ་ཡར་ རྒྱས་

འགྲུང་བཞིན་པ་ཨིན་ནོ།།

The Accounts of Choje Drak and Babron Tharpaling, Bumthang

*Translated by Thinley Jamtsho**

In the 8th century, Guru Rinpoche visited all mountains, cliffs and lakes of Tibet, Bhutan and other places, both physically and miraculously, without even leaving a place as small as hoof of a horse, and concealed and blessed innumerable treasures of dharma and wealth.

Choje Drak (cho rje drag) is one such land blessed Land. It is one of the cliffs of four directions. On a cliff similar to a stacked of Buddhist scriptures is a throne (bzhugs khri) on which Guru Rinpoche sat physically. There a self-emanated conch (gdung dkar) and an abode of a Nyingma deity (zhing skyong gi dbang mo rdo rje gyu sgron mo)¹ can be seen clearly.

Atop a mirror-like cliff, a cubit long (khru gang) footprint of Guru Rinpoche left when flying towards the land of demon (srin yul). There is also a pugmarks left by a tiger on a Vajra Throne (rdo rje bzhugs khri) when Guru Rinpoche arrived from Paro Taktshang (stag tshang) in the form of Guru Dorje Drolo (rdo rje gro lod).

Onrey Darma Singye (dbon ras dar ma seng ge) alias Lorey Dragpa Wangchuk (lo ras grags pa dbang phyug), who was

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¹ One of the twelve Tenmas. 1) Dorje Kundrakma; 2) Dorje Ya ma chong; 3) Dorje Kunzang; 4) Dorje Geg kyi tso; The four which are female yakrhini: 5) Dorje Chan chig ma; 6)Karak Khyung tsun dorje pal gyi yum"; 7) Dorje Lumo"; 8) Mari rabjams dorje dragmo gyal; and the four which are menmos: 9) Kong tsun demo doje bod khams chong"; 10)Tsan laloro dorje manchig ma; 11) Man tsun dorje yamo sil; 12) Dorje Yudronma.

the chief disciple of Tsangpa Jaray Yeshe Dorji (gtsang pa rgyas ras ye she rdo rje), the founder of Palden Drukpa, came to Bumthang in the 12th Century and (resided) at the sacred site of Choje Drak blessed by Guru Rinpoche with a heap of relics in [forms of] cliffs and mountains. Tsangpa Jarey and a group of twenty thousand accomplished meditators meditated in Choje Drak, thus making the site as meditation place of the Drukpa Kagyud School. Thus it was named Choje Drak.

The monastery (gdonpa) of Tharpaling is similar to Choje Drak Goenpa. In the 14th century, Longchen Rabjam (Klong chen rab 'byams) (1308-1364/1369) came to Bhutan, and established Tharpaling, [Bumthang], as the centre for spreading the teachings of Radiant Vajra Heart ('od gsal rdo rje snying po) [of the Great Perfection (rdzogs chen)]. Tharpaling is named after the countless followers of the heart essence (snying thig) of the Luminosity Vehicle ('od gsal theg pa), who achieved liberation (thar pa'i go 'phang) in lifetime.

In Tharpaling, towards its north-east and south of Sengye Drak, the Great Lineage Holder (rig 'dzin chen po) Pema Lingpa (1450-1521) revealed [treasure of] a statue of wrathful Guru (bla ma gu ru drag po). He also opened many other sacred sites (gnas) on its door to meditation cave (sgrub sgo).

From the ruins of Assembly hall in Tharpaling, Pema Lingpa also discovered the Assemblage of Realization (dgons 'dus chos) concealed by Kuenkhen Longchen. Besides being the sacred place of treasures, many holy caves where saints meditated in the past can be seen in and around Tharpaling.

In the past, Central Monastic Body, Punakha took care of Choje Drak monastery, and Choje Drak Lama was considered one of the four great lamas. Later, it was passed to Tongsa Dratshang, which appointed Choje Drak Lama to take care of the sacred site.

The Accounts of Choje Drak and Tharpaling

Tharpaling Monastery was prosperous during the time of Longchen Rabjam, but later only its name remained. In the 19th century, first king Ugyen Wangchuck and Drupwang Togden Shakya Shri (rtogs Idan Shakya Shri) (1853-1919) established retreat centre with thirteen monks and built a temple. Later, Geshe Kuentob (Kun stobs) started Monastic Institution (bshab grva) for Buddhist Philosophy. Geshe Tenpa Rinchen (bstan pa rin chen) followed and established monk body and Monastic Institution for studying thirteen types of Buddhist philosophies (Zhung chen bcu gsum). Since then Tharpaling became the source of both Kagyud and Nyingma teachings. Under the request of lama and lopon of the monk body, eminent scholar Ugyen Tenzin Wozer (ao rgy bstan 'dzin 'od zer), alias Nado, was appointed as the principal. In 1983 Fourth King Jigme Singye Wangchuck provided free welfare services like any other dratshang in the districts. The monastery is still prospering.

Educating for Happiness: Some practical Questions and Possible Answers

*Dr Ross McDonald**

Abstract

As Bhutan moves to further develop policies to enhance Gross National Happiness, increasing attention is being devoted to how education might contribute to this important goal. The following paper outlines one possible approach that is based on a future-oriented pedagogy used at the University of Auckland in New Zealand. Developed over many years of experimental teaching, it offers one possible way by which a more integrated, resilient and happy alignment of positive values and contributory action might be facilitated in the classroom.

What does educating for happiness imply?

The most fundamental starting point in addressing this question is to be clear on the terms we are using. This means that we need to have a very precise understanding of what “happiness” actually is. We might then begin to design and execute strategies for enhancing it.

To take happiness first, I believe our understanding of what happiness is are often quite superficial and uni-dimensional. For many, and particularly for those imbued in a western secular mindset, happiness refers only to a personal

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emotional state and there are several problems that follow from this inadequate definition.

Most important is the tendency to contain visions of happiness within the individual person and through this to fail to appreciate the inherently inter-connected nature of well-being. If happiness is seen as a personal attribute only, we immediately de-emphasise the reality of its interconnectedness. In truth, happiness depends on inter-connection and any individual experience of it is impacted by our relationships to the social and non-social worlds around us.

This is an understanding that is inherent in most non-western countries, as for example, in Hindu and Buddhist systems of thought, where the best route to happiness is via positive engagement with others and ideally, through active contribution to others wellbeing. This is the basic framework that expresses itself in the *bhakti* and karma yoga traditions of the Hindu system and in the doctrines of the bodhisattva tradition in Mahayana Buddhism.

It is a framework that has been under-emphasised in the more individualistic conceptions of the modernist West, but is slowly re-entering that consciousness by realising that happiness, as an individual outcome, is served hugely by the quality of our relationships.

This inter-connected view of happiness is still inadequately understood and needs to be made explicit if we are to educate for genuine happiness. To educate for happiness is never to educate the individual to further their own happiness in isolation from others as this is impossible. It brings a much richer potential to bear on our efforts, because in linking individual with collective happiness we can work towards systems of educating that not only intensify potential happiness but also simultaneously work to enable these individuals to act considerately and harmoniously with

others, so that a general happiness is also achieved in the process. We need to be fully mindful that happiness is not about individuals, but about the quality of relationships individuals have with others.

Yet this takes us only partially towards an adequate understanding of what an education in happiness involves, as we may recognise the interconnected nature of the phenomenon, but still miss the deeper dynamics of happiness as it develops within and between us. To see happiness as a merely emotional state that is somehow separable from other aspects of being is singularly naive. Happiness exists as a complex attainment that depends utterly on the cultivation of a wide range of integrated capacities.

It is often imagined symbolically to a jewel that has many aspects. These include insightfulness, wisdom, compassion, appreciation and the ability to love. It is then a multi-faceted state of being that cannot be viewed simply as an emotion. Properly understood, it is the final flowering of a mature integration of head, heart, soul and will. This implies that an education in happiness must accordingly be a multi-dimensional undertaking that engages and seeks to integrate a wide range of capacities. Happiness is a holistic ideal that requires a holistic approach to the person and their development.

This brings us to the meaning of education and this too needs to be properly understood if we are to build on solid foundations. Education properly defined refers to a 'bringing out from within' and is therefore premised on a particular understanding of human nature and how our potential can be best facilitated. This meaning involves an inherent optimism as to the hidden potential of development, and implicitly assumes that much that we think of as the best of our being exists in nascent form within the human soul.

The role of education is to clear the way for the unfolding of human potential and to imagine means to nurture its expansion and expression. In many ways, this humane idealism has been squandered by the authoritarianism of most mass educational processes as they are currently applied in the world.

Most national systems now assume that education involves not a bringing forth of potential, but a forcing in of largely uni-dimensional abstractions from without. As this shift has gradually become normalised, the role of the teacher has moved from collaborative facilitation to forced manipulation of the learner. The result has been a separation of head and heart and a basic dehumanisation of education, whereby learners are silenced, standardised, and disrespected as collaborators in an active process of fulfilling personal development.

Such 'education' is typically arranged in response to fit with the efficiency demands of scale and the larger the institution, the greater the degree of depersonalisation. This is the typical process of bureaucratisation and it points to a real problem in mass education, where scale works directly against the intimacy that really is a requirement for effective education in its traditional sense. Educating for happiness is all about creating spaces within which fuller and more harmonious states of seeing, being and inter-relating can be cultivated.

What does educating for happiness require in broad terms?

The most basic practical requirement is for teachers, or more properly facilitators, to be accomplished in their own development. In many ways, an adequate education for happiness involves seeing beyond the limitations of egotism and the conflicts this inevitably engenders both within and beyond the self.

If the facilitator has not managed to overcome the basic corruptions of self-absorption and self-centredness, then a genuinely collaborative and open process will not be possible. The egocentric educator is always prone to defensiveness, conflict, closed-mindedness and subtle violence in their relationships with others – tendencies that lead directly to dehumanisation and not the opposite, which a proper education in happiness would facilitate. Effective processes begin with the effective development of the facilitator.

To nurture the unfolding of a full humanity is a fragile and delicate art that requires gentleness, respect and an attitude of genuine service to others. If the educator is not highly developed in their own being, they will not be capable of dealing flexibly, openly and compassionately with those who wish to learn and the end result will be a miserable one or all concerned.

If we assume that the teacher has managed a certain degree of personal development, then the key to successful application is the balance that is achieved between structure and openness. As implied above, much of education - and this includes education in values, places too much emphasis on abstract content that is often of little use to students in meeting the real problems of living daily life in their communities and natural environments. As a result, changes to curricula, new materials, additional topics and subjects are introduced but seldom is the actual process of delivery given much attention. Good source materials are inordinately important, but often the emphasis on the pre-eminence of these reflects a deep assumption that understanding lives in dead pages and not in the living minds of learners.

I personally have a great deal of faith in the potential of young people (and indeed people of all ages) to reach critical understandings through dialogue and through bringing to the surface implicit, but often little articulated understandings and insights. Content then, in the sense of others opinions,

should be used sparingly as a means to prompt thinking and not to conclusively close it down, which is all too often the case.

This becomes a particular problem as we move towards the higher ends of the educational process where head-only learning tends to predominate and as a result, learners are increasingly encouraged to memorise and accept the opinions of external 'experts' and to deny the relevance of their own inner judgment and wisdom.

In designing experiences that can genuinely facilitate human potential, it is essential that the learners' understandings are the primary materials that we work with. In the course on values and ethics that I teach, students are regularly discouraged from going to the library and are encouraged instead to learn from each other - and from those around them - through open respectful dialogue and constant enquiry. The aim is to allow the person to develop their own resilient understanding of the world and their relationship to it.

In order to do this, their own values, assumptions, insights and biases have to be brought to the surface, articulated and tested in a humane and non-judgmental atmosphere. When such spaces are created, people display remarkable wisdom as heartfelt opinions are shared, challenged and built into robust insights. More formal materials from 'experts' can then be used constructively to further validate these self-generated understandings, or to explore other nuances of the issues under mutual consideration.

Education for happiness should then be driven overwhelmingly by the concerns of the learners themselves in spaces that encourage deep reflection and open collaboration. When this works, and I rarely experience situations where it does not, the results are inspiring and deeply humbling for any committed educator.

To make this practical though, we need to engage on a human scale where open sharing is possible. It is often argued that the optimal size for group interaction is around seven people and while this may be true, it is largely impractical in all but the most luxurious learning situations. When such a scale is possible there is the opportunity for real intimacy and the unique personalities of all can be specifically and deeply addressed. For most educators this will not commonly be the case, but the benefits of very small group situations can be compensated for by some of the larger synergies that a more diverse range of perspectives can bring into being. In many ways, there is a trade off between breadth and depth of engagement that can remain in balance in groups of up to 40 people. Beyond this scale real educational potential suffers and it may well do so at significantly smaller sizes as we descend the age continuum.

How could an education for happiness be designed?

Assuming that the pre-requisites for open discussion are in place – particularly a small group and an accomplished and sensitive teacher - the issue that becomes key in organising for an effective education is how to arrange the process of interaction and collaboration. In the area of holistic education there is a wide variety of opinion on how much the learning experience should be designed and this will vary according to the age group involved and the particulars of the group itself. In my experience there needs to be a balance struck between structure and openness that allows for flexibility yet involves some degree of constructive direction in the learning process itself. When the need for direction is taken into account along with the overall goal of facilitating a multi-dimensional flourishing in which head, heart and will are brought into alignment the issue of structure really involves working on several levels simultaneously. One arrangement that I have found to be inordinately practical is to structure the learning process into three broad episodes which are the following.

First of all, it is important to recognise that effective learning in any area has to be purposeful and as such, I explicitly frame our initial deliberations around the question of what kind of society we wish to come into being in the near future.

To focus deliberations we usually settle on the year 2020, as an anchor point although this can be shifted according to the age and particular concerns of the group involved. 2020 is useful for our purposes because it represents a point in time that is tangibly connected to the present (being only 10 years away) but distant enough to imagine significant change. We open discussions to trying to define what this world will look like in concrete and tangible terms.

In the second phase we then move to discussions of how we feel about the chances of this world coming into being by that date, and how our personal actions in the present are contributing to or detracting from this possibility. The final part of the process involves us looking at how we can practically develop personal strategies in our own lives that will help make this better world become a living reality. In framing the learning experience in this way, learners are made conscious of a progression that is both logically and emotionally meaningful. Learning is given an explicit purpose of defining and contributing to a better and happier world, and a strong sense of empowerment and integrative purpose comes to permeate the process.

As this sequential engagement is followed, learners simultaneously bring to the process an increasing integration of intellectual, emotional and motivational potentials that ends in a more harmonious alignment of head, heart and will. Although these capacities are involved in all stages, the structure is designed to bring to the fore each in turn by emphasising a particular mode of responsiveness.

In the first stage where a better world is defined, the head is pre-eminent as learners think through the elements that

make upon a better society and logically argue these to find consensual common ground. This part of the experience typically also involves detailed deliberations as to the synergistic roles of different social institutions and the relationship these have to making or corrupting valuable ends.

The second structural phase involves bringing the heart to the fore as we explore our fears and hopes for this world, how better and worse worlds will feel, and the personal reactions we have when recognising our own inadequacies in contributing to making these dreams realities. The final stage aims to bring the will to the fore, as we explore practical ways in which we can overcome our own inconsistencies in order to actively work towards bringing this idealised world closer.

The end result is an integration of understanding, feeling and determination that releases astonishing energy in the classroom. The structure then is designed to make learning sensible and orderly, to facilitate a multi-dimensional development and ultimately to release a wiser, more considerate and more resilient character capable of sustaining personal and collective happiness.

Within this thematic structure however, the process is completely open. It is the learners themselves who define what a better world looks like and why. It is they who determine the extent to which their own actions might be falling short of their own ideals and it is they who identify the practical strategies that they might personally undertake to contribute to a happier world. This is then structuring without violence, and without the impositions that undermine personal growth.

It is facilitation with a light touch that aims to provide purpose and direction, but only to the extent that this facilitates focussed and meaningful sharing and unfolding. There would be other ways that basic frameworks could be

conceptualised, and I have experimented with many, but I have found this future-oriented one to be particularly powerful in practice.

How might an education for happiness be structured?

It is useful to remember that happiness is an outcome that can only be approached through the co-development of other aspects of being, and through their successful integration. With that in mind, we can look at each of the stages in learning that have been outlined.

Finding common ground in positive visions of the tangible future

It is very helpful to provide an explicit focus that frames and focuses attention, and if a future point of reference can be established, then it grounds discussion and allows us to work with specific outcomes in mind.

I begin all courses that I teach with a variety of exercises through which learners get the chance to talk in small groups, and through this to consciously articulate their often only vaguely formed thoughts and feelings in settings that are comfortable and amenable to open sharing. These groups are changed in terms of membership, so that participants are asked to form new groups with people they have not yet spoken with, in order that a wide sharing of perspective is facilitated but also so that they can get to interact with as many of the group as possible. This is very important in creating an atmosphere where people feel that they are on familiar and friendly terms.

The ideal size for these small discussion groups, which is where a huge part of the actual learning occurs, is around four people. A working group of this size brings a variety of perspectives into play, allows all to feel included, and avoids

the tendency in larger groups for some to withdraw into merely passive roles.

I find it very constructive to set discussion topics that ask learners to reach consensus and this requires that they share, compare, test and finally agree on the basic issues under discussion. Each discussion in a new group then follows on from the conclusions reached in prior discussions bringing flow to the process and a real sense that the opinions being expressed are being valued.

We typically begin our classes in values and ethics by trying to identify what type of world we want to live in the year 2020. It is a useful place to begin because there is no right answer to the question, and so learners have to draw out their own personal values in order to build perspective. Given the open-ended nature of the task, we narrow it down such that groups are asked to reach consensus on a list of five or six basic descriptors of this 'better' world. The groups work to identify these and to find common ground, and then they take these ideas into new groups where the exercise is repeated. This can be done more than twice if the groups are still searching for agreement, but generally I find that two iterations are sufficient for learners to clearly develop a set of ideals upon which they fundamentally agree.

In doing this work for many years and in several different cultures and countries, I find the results are typically very similar. Young people look to their future and want it to be secure, non-violent, sustainable, just and inclusive (generally meaning that no-one is deprived of the basics required for a good life – education, food, human rights etc). These are highly consistent emergent ideals and as we collate the various responses we typically find ourselves on common ground, ground that has been created openly and actively by the learners themselves.

A period of consolidating and testing these ideals follows, whereby larger group discussions refine any overlaps into a robust and committed set of practical end-states, which we can all agree as a group we would like to see obtain. The validity of these can be made more resilient still by looking at the opposite states of a 'worse' as opposed to 'better' world. In the end, having discovered a shared set of meaningful ideals students feel a genuine sense of commonality and purpose which is of great value in all that follows.

The direction of learning from here can take many directions as it is responsive to the uniqueness of the group, but several possibilities can be of particular value. The first is to note the cohering justifications that are inherent in the collective view of the good society. Ultimately, students will readily agree that these end states are valuable because they will allow for a genuine and widespread happiness to be obtained and so the link to a happier society can be made almost immediately. The second is to engage in a series of discussions that show that in order to reach this more just, sustainable and happy society, a widespread moral maturity will be required if others interests – be they future generations, other living creatures or the excluded and exploited – are to be truly included. Through such explorations the connections between happiness, harmony and ethical maturity can be quickly and efficiently established.

It is also very useful to combine some reflective writing to consolidate and deepen learning in this stage of the process. Students can be asked to explain why certain virtues need to be spread more widely in society if the outcomes we desire are to obtain and also to explore in writing what social or institutional changes would be helpful in achieving genuine progress.

The first option, focussing on individual characteristics is useful because it links individual level factors such as generosity, wisdom, compassion, appreciation and courage to

social outcomes such as justice, sustainability, non-violence and inclusion. The second option is equally useful in broadening thinking on how different social forces (such as government, media and education) are inter-linked and must be co-ordinated if positive change to a happier world is to become a reality.

In exploring individual values, I often ask learners to again discuss the vital individual characteristics (or virtues) in small groups and to again reach consensus on a basic list, which almost invariably comes to cohere around greater consideration, the ability to exercise self-control and having a more educated and informed understanding of the inter-connections between personal action and the outcomes experienced by others.

In discussions of social/institutional changes learners commonly come to agree that more informative and less sensationalist media would be useful along with improved education in values and more vigilant government control of material economy and its wastage. To get the most out of this learning it is useful to have learners first work towards consensus in dialogue and then to consolidate these understandings through some personal writing, during which they are asked to reflect and more deeply explain their thinking. The end result of these deliberations is a much more complex and integrated understanding of how a happier and more decent world can be brought into being, why it is important and what needs to be accomplished socially and personally if these ideals are to become a living reality.

This part of the learning for a happier world is primarily abstract and engages the head more than other realms but not purely so. To identify the lineaments of a better world requires delving into personal values and complex of feelings. It also begins to have students think purposefully as they envision a future point of time and open up to how we might shift to get there. From the outset we are working on multiple

levels – of the head, the heart and the will. Yet, the initial stage is primarily intellectual and deliberately so, as this is generally a safer realm for learners to begin their engagement and importantly it also allows for a rigorous clarity to be established, which is employed as a constant orienting structure for the rest of the experience. The second phase of learning then builds upon this mental clarity as we move to a greater opening up of personal dynamics and the deeper emotions these entail.

Exploring personal values, deep emotions and common barriers to engaging our ideals

Once a shared vision of a happier future has emerged and some basic connections to personal virtues and social process have been clarified, a useful progression can be made by entering into a period of deeper reflection on our own personal relationship to these ideals. There are a variety of ways that a sensitive educator can proceed and the particulars are always determined by the needs of the group as a unique collection of people. I have found that a particularly valuable way to deepen understanding is to allow learners to engage in one or both of two broad themes aimed at developing a deeper insight and connectedness.

The first of these, and the more challenging, involves asking learners to look openly at the degree to which their own daily lives reflect the ideals and values that have been explored in the first stage of the learning process. Are we personally acting in accordance with the ideals we espouse, or is there a considerable gap between how we act in the present and how we know we should act if a happier future is to be obtained? There are many ways of asking this specific question and the sensitivities of the group really have to be at the forefront of creating constructive engagement. One way of engaging reflection is to have us consider those who are excluded from many of the benefits of an advantaged society and to ask how compassionate, inclusive and generous we are in our

everyday relationships with these constituencies. Thus, how much time or money do we give as individuals to help those who are disadvantaged or excluded?

I find that at this stage, some supportive materials are useful either to give a more felt insight into the sufferings experienced by those who are in poverty or hunger, or who are lonely, hurt or ill. I have shown videos, given short readings of had talks given to learners to make these connections emotional ones, as genuinely compassionate engagement stems from a fundamentally emotional sense of connection.

If I ask how much time or money learners are giving to charity, how much effort they put into voluntarily helping others, or about the practical support they provide to those actively attempting to make positive change, we typically find that most are falling well short of what we mutually recognise we could or should be doing. Very few people actually give money to others in need, or visit those they know are lonely or ill, or share their time in communal efforts for the good. The main purpose in bringing these inconsistencies to the surface however, is not to prompt bad feeling, but to take a clear look at the facts of discrepancy and to delve into the personal barriers that prevent us from acting more in alignment with what we recognise as necessary if a happier world is to be created.

This phase of opening up can be an emotionally-charged one as learners are brought face to face with some of their own shortcomings. If asked for example to rate themselves on self-created scales (say from 1 to 7) that specify the extent to which they are living out the virtues they previously identified as essential to happiness, most find themselves acting in ways that are less than ideal. As they reach this insight, learners often experience strong emotional responses – embarrassment, awkwardness, frustration, disappointment

and so forth and these needs to be channelled towards empowering and not disempowering outcomes.

Perhaps the best and most sensitive way of doing this is to focus discussion on identifying the barriers that we all experience when trying to put our abstract values into practice. When learners reflect in this mode they usually come to recognise a common set of shared blockages that include selfishness, a sense of futility (I can't make a difference), a diffusion of responsibility (it's up to someone else), social comparison (no-one else is helping, so why should I?), peer pressure (its uncool) and diffuse intentions to improve personal contribution at some indeterminate point in the future. These are all common and very human constraints and to see them operating in ourselves clears the way to consciously challenging them in our own daily lives.

The over-arching purpose of entering into such reflection is to gain insight into the discrepancies that we all carry between our abstract ideals and the way we actually live our daily lives. It can be an uncomfortable learning, but handled with sensitivity it is tremendously powerful in pointing the way to overcoming the conflict between head and heart and bringing our whole being - our thoughts, speech and actions into a more constructive and happy alignment. The critical emphasis however must always be on understanding and not condemning.

A companion mode of engagement is to have learners discuss and write on how they feel when they do act with head and heart in harmony. I regularly use reflective writings and exercises which ask learners to go into the world with the positive intention of acting generously and compassionately. There are many ways of doing this, but one of the most effective is to ask learners to do a number of good and generous acts that help others and to write about the experience. Learners can be asked to perform two good deeds and to write about how they felt both during and after

executing the helpful actions. They can be asked to reflect on and to discuss what such contributory actions did for the quality of the relationship (e.g. strengthen or weaken it) or how the others responded - all with an aim of sensitising them to the positivity of acting in harmony with ones ideals, and so coming to realise more fully how contributory actions really do boost the happiness of self and others.

When young people engage with these exercises the insights they gain are primarily emotional and this can be made more explicit by asking them to rate the extent to which these actions impacted on their well-being on a numerical scale of say 1-7. Whatever the specifics, building all such experiences around the opportunity to share and develop collective understandings is paramount and small group discussions and open sharing should be employed throughout.

If time permits, ideally an education for happiness can employ both processes – of developing insight into the nature of personal inconsistencies and into realising the felt benefits of acting well. Both involve bringing emotional responses and realities to the surface and explicitly linking these to the conceptual understandings of what is needed of us all - if a happier world is to be built. The result, when managed well, is a strong momentum towards a greater harmonisation of head and heart and the beginnings of a spontaneous search on the part of learners for ways in which a greater alignment can be pursued in their own lives.

The pressing question most have at the end of this phase is how they might personally act in order to actively contribute to bringing a happier world into being. This leads directly to the third and final stage of learning, which brings into play the will and how it might be employed to help us overcome our own personal inconsistencies so that we may enjoy a more positive and purposeful involvement with the world around us.

Designing practical pathways for personally enhancing the happiness of self and others

By the conclusion of the first two phases of this holistic process, learners typically emerge with robust understandings of what a better and happier world will look like, what it requires both at the individual and collective levels, and of the extent to which being in alignment with these ideals induces happiness and being out of alignment detracts from it.

These powerful insights are enormously helpful in allowing learners to realise their place in an inter-connected and value-based web of relationships. But important as these insights are, the process at this stage is incomplete as for many, it will not be apparent how they might best respond to this enhanced clarity. The final stage of educating for happiness builds upon what has gone before to facilitate resilient plans for consistent action that will in practice bring head, heart and will into a fuller synthesis.

The completion of the first two stages of learning leaves students remarkably engaged and highly motivated to identify practical ways by which they might find a happier alignment in their daily lives. The dynamism this brings to the final stage of learning is remarkable and the energy released in the classroom is very positive indeed. There are many ways in which the final integration of forward-looking will might be engaged depending on the level of the learner and the specific goals involved. In my work with young people in their late teenage years, I have found that an active focus on their future personal plans is highly effective. Over the years we have come to focus on how their ideals might be put into action around the development of creative value-based contributions in the area of organisational development – this being a direct reflection of the interests of the majority of the groups I work with. The principles though can be adapted to any situation.

As learners come to realise shared goals and recognise how their own actions towards this can lead to greater happiness for self and others, they begin a spontaneous search for the most practical means by which their engagement might be made effective. In exploring a range of possibilities, I have found that the United Nations Earth Charter to be a very valuable document to employ in this search as it articulates clearly and compellingly the framework within which we all have to act if we are to secure a decent, just, sustainable and happy future. The Earth Charter is a well-known and much respected document that outlines a blueprint for genuine progress, and lays down a set of principles for responsible action. It is divided into several components but broadly conceived it speaks to the need for all to engage wisdom, compassion, self-restraint and generosity in our personal and professional lives in order that a collective, inter-related thriving can be secured.

This point in an education for future happiness opens up opportunities for wider collaboration within a group as they seek to define for themselves how they can contribute to a happier world without causing injustice, ecological harm or suffering for any larger constituency. The document's guidelines are explicit and demanding, stating that given current global trends, any actions that exacerbate resource depletion, pollution, exploitation, division or ignorance are ethically unacceptable for an improving world. Learners in my classes are given this document to study in detail and to discuss as to its relevance to the better worlds they have previously identified.

All groups in my experience find that the Earth Charter represents an eloquent and defensible (if challenging) summary of all of the major conclusions they have previously agreed upon. Having affirmed the legitimacy of the document, we then try to identify real practical courses of action that will contribute positively to the world around us, without violating any of the principles of the charter. Learners are accordingly

challenged to develop practical plans for innovations, services, goods, institutional changes or community development that will help facilitate their vision of a better world, while staying within the confines of the Earth Charter. This is a challenging but highly meaningful task and in my experience, young people engage with it with real energy and focus.

Given the challenging nature of the task, we typically form slightly larger groups than the four person ones that are used in most of the previous discussions. By this time, participants are typically more comfortable working in larger groups, that they are more motivated to share and discern useful answers and that there is genuine value in bringing as much perspective to bear on the ideas as possible. To avoid the possible domination of discussion by a small minority, the educator can employ a variety of techniques to balance input, such as having an object to be passed around which allows only the holder to speak or any other of a large number of such facilitation rules. I have in the past experimented with having small groups develop plans for practical action as teams, but these are far less meaningful than encouraging individuals to think up practical pathways that will allow them to shape their own intentional contributions to best fit the specifics of their own lives, values and planned futures.

This final stage of the learning process is where collaboration comes most to the fore as learners become truly inspired by each other's ideas and the synergies of sharing have their most tangible pay-off. In the many times we have explored options for future conduct, the creativity and commitment of students has been striking, and it is often the case that learners organise for many hours of mutual sharing outside of the classroom as they exhibit a desire to deeply explore the question and seem highly motivated to identify pathways that will allow them to genuinely contribute to building a better world.

It is also at this point that a tangible happiness begins to pervade our deliberations as a hopeful positivity of purpose comes to dominate the proceedings. To witness this is wonderful thing for any educator, as you can see people literally blossoming before your eyes. I have no doubt at all that this is a function of mutual collaboration and of a fuller realisation of one's integrated potential to think, speak, act and feel in value-grounded ways of being.

The final results are a host of positive plans that are capable of genuinely adding to a spreading happiness. Given the previous exercises and discussions, learners approach their future plans with an inherently reflective and broad-minded intention that spontaneously thinks in inter-connected and broadly considerate ways. I have seen a wide variety of plans put into action ranging from providing healthy lunchboxes of organic food to busy office workers, to educating consumers on the sustainability of what they consume, to monitoring systems for businesses social responsibility, to obtaining and using recycled woods for furniture production. Again, all of these interventions are developed by the learners themselves in an environment structured to maximise collaboration and positive creativity. There is literally no end to what can be developed under such forms of holistic engagement and the happiness generated in the process is tangible, infectious and profoundly practical.

The end result is, I believe, a greatly enhanced and highly resilient development that empowers learners to think, feel and act in happiness generating ways. It is a fulfilling and holistic process of collaborative learning that consciously aims at building a happier world and it has a considerable potential for succeeding in its intention.

How applicable would an approach like this be to Bhutan?

I believe that this approach to integrative education has much to offer Bhutan at the present time. The Fifth King and the

current Prime Minister have shown a remarkable commitment to both generating Gross National Happiness and to adapting education in the kingdom to facilitate this outcome.

The above model has been successfully used in a wide variety of contexts including in shorter iterations with Vietnamese, Indian, Samoan, Scots, American and Maori learners. It is not bounded by cultural constraints, as the specific content is always developed by learners themselves. The broader facilitative process is designed to build on universal human concerns about the future and about personal and collective improvement.

The overall design has been developed with a particular age-group in mind; those in their late teenage years or early twenties. As such, it could be easily applied in late high school, in the country's colleges or in classes at the Royal University. Its broad applicability comes from its ability to connect where the learner is now, with a future vision of a better world and how that might be brought into being. Given that Bhutan has a very explicit future vision of cultivating greater happiness, this collaborative, integrative approach could contribute in constructive and eminently practical ways. The resource demands are low and the outcomes high in quality. These include enhanced value-consistency, greater self-awareness, a more integrative understanding and an increasingly resilient sense of contributory purpose all of which are fundamental to achieving both personal and collective happiness.

The thematic approach can be easily adapted for any mature group where the creative integration of personal values, social goals and practical planning is deemed desirable – thus, government officials and graduating students returning from overseas study might clearly qualify. However, for younger students, the approach would need some modification. It would be unreasonable for example to expect younger

children to be able to think of the complexities of social arrangements or to contemplate their own inconsistencies. These are considerations appropriate to more mature learners but still, the articulation of personal ideals for a better world and reflecting on the benefits of acting considerately could be applied at any level of the educational system. At younger levels the extent of action could be curtailed to look more at community or village contributions, but as I have not worked formally with these age cohorts I can only speculate on what would work best. With late high school students, college level learners or for those in government service however, the above approach to extending happiness could easily be applied in its existing form.

In its current application, learners are involved for fairly long periods and total contact is in the realm of 30 hours. This allows for a very deep engagement and a prolonged development of shared ideas. It is possible to shorten the experience and to facilitate significant learning in much shorter time frames. This inevitably involves some compromising of its potential, but I have run versions of this facilitated learning over weekends, and in short one-off sessions where the emphasis is on the first and third part of the process (identifying valuable outcomes and pathways to those). These have been very well received and the more professional, focused and mature the group, the shorter and more direct the process can be.

Perhaps the greatest applicability for Bhutan though relates to the alignment of this holistic, collaborative and reflective approach with basic Buddhism principles. Both seek to facilitate a fuller flowering of our potential through realising inter-connection, and the importance of bringing all aspects of being into a contributory alignment. The dynamics of both aims to open up learners to deep realisations about the miseries of egotism and conflict, and to open the way to a happier flourishing. None of the specific content of what a better world would look like, what values could contribute to

that, or which courses of action would be most fruitful are pre-determined, but all emerge from the group dynamics themselves. It is therefore a responsive and flexible model that can find easy harmony across cultural boundaries and particularly with Buddhist sensitivities.

In my many trips to Bhutan, I have been party to numerous discussions in which genuine concerns have been voiced about how the country might lose its cultural bearings - as so many others have done. As all nations open up to the influences of foreign commerce, media and politics, there arise real fears that the young in particular may lose their grounding and be tempted into a destructive materialist modernity that rejects traditional values.

The only antidote to this is a resilience rooted in humane insight, and a common sense of positive purpose. Education has a major responsibility in developing this resilience, both formally and informally, and its structuring is of critical importance. There is a real need now - not only in Bhutan - but worldwide, to shift education in a direction that makes it a force for our collective development through facilitating the emergence of a generation of thoughtful, appreciative and purposeful citizens.

The practices outlined in this paper have proven themselves to be effective in facilitating these outcomes, and as part of an integrated and balanced educational effort in Bhutan, they might harbour considerable potential to contribute to a fertile and resilient Gross National Happiness.

Vulnerable Medicinal Plants and the Risk Factors for their Sustainable Use in Bhutan

Phurpa Wangchuk, Ugyen,* Annette Olsen³*

Abstract

Free listing and ranking techniques were used to acquire information on the medicinal plants, which grow exclusively in Bhutan, and to list the 15 most vulnerable species. Furthermore, the possible risk factors that may affect the sustainable use of medicinal plants were also identified.

Self-administered, open questionnaires were answered and returned by 10 professionals who possess an extensive knowledge on medicinal plants used in the gso-ba-rig-pa system. A total number of 153 Medicinal and Aromatic Plants (MAPs) were listed. Almost 90% of these species are currently used by the Institute of Traditional Medicine Services (ITMS).

*All of the 15 most vulnerable species are high altitude medicinal herbs found in fragile ecosystems of the Himalayas between 3,000 to 5,500 meters above sea level. Among them, *Meconopsis simplicifolia* (D.Don), Walpers ranked first in its score and is considered the most threatened species. In the questionnaires, the respondents identified approximately 10 risk factors, which are related to the sustainable use of MAPs.*

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These risk factors broadly fall into four categories: biological, ecological, social and economical factors. Current policies, frameworks and acts which are put in place to ensure the sustainable use of medicinal plants are described in this paper as well as a discussion on possible future directions.

Introduction

Human beings, through intuition, have invented the art of healing systems, which are mostly based on medicinal plants. These medicinal plants are accredited with mystical and supernatural powers of healing. They are used widely across the world for primary health care and also in modern drug discoveries. It is estimated that more than 13,000 species of Medicinal and Aromatic Plants (MAPs) are used in traditional medicines and herbal cosmetics throughout the world (Wilkinson et al, 2002). About 8,000 of these MAPs are known in South Asia alone (Karki, 2001).

In Bhutan, medicinal plants have become an indispensable tool for treatment regimens and poverty alleviation. Treatment regimens are available in two systems: *gso-ba-rig-pa* is a codified traditional medical system incorporated and integrated into the mainstream of national health care delivery services, and the *Local Healing System*, which are not documented but practiced countrywide (Wangchuk, 2007). Both these traditional medical systems use medicinal plants as the bulk ingredients.

While the species and the consumption pattern of medicinal plants are not determined for the *Local Healing System*, more than 500 species of medicinal plants are recorded in the pharmacopoeia of *gso-ba-rig-pa* medicines (Chophel 1993). As many as 300 species of medicinal plants, which grow in diverse ecological zones of the country, have been identified so far and more than 200 of them are currently used by the

Institute of Traditional Medicine Services (ITMS) in the formulation of 98 different essential *gso-ba-rig-pa* medicines (Wangchuk, 2004).

In 2007, 16 tons of medicinal plants were procured by ITMS alone (Tenzin, 2008) and 85% of them, almost all wild species, were collected within the country (Wangchuk, 2006). An analysis of the current data shows that around 60% of the plant species collected within the country is harvested from about 3,000 to 5,500 metres above sea level and only 25% are collected from low altitude areas.

The collection, conservation and sustainable utilisation of MAPs in Bhutan are guided by sound legal frameworks and acts: Forest Act 1969, Plant Quarantine Act of Bhutan 1993, Forest and Nature Conservation Act of Bhutan 1995, Environmental Assessment Act 2000 and Biodiversity Act and Framework of Bhutan 2003, 2006 (Yaganagi, 2006; Tshering, 2006). Because of this, the biodiversity scenario in Bhutan is commendable and so flourishes the MAPs.

However, in spite of this, implementation of such legal frameworks is made difficult by lack of basic information on the biology, ecology, synecology, autecology, demecology and sustainability of MAPs in Bhutan. Apart from a few sporadic surveys and consumer chain analysis carried out by the Department of Forest (DoF), Medicinal and Aromatic Plant Section (MAPS) and ITMS, little research has been done on the Non-Wood Forest Products (NWFP) of Bhutan.

Our study on the sustainable use of MAPs in Bhutan is expected to partially bridge the information gap mentioned above. Therefore, this paper identifies the vulnerable medicinal plants, which are believed to be the most threatened species, presents the possible factors affecting the sustainable use of MAPs, and provides some recommendations to enhance sustainability of MAPs in Bhutan.

Materials and Methods

The study focused on the MAPs used by ITMS and did not include those medicinal plants used by local healers and other traditional practitioners in Bhutan. Free listing and ranking techniques (Martin, 1995) were used to get information on medicinal plant species and to identify and select the highest priority species within the framework of sustainability. In this technique, each ranked item is assigned an integer (1, 2, 3 and so on) with the most important or preferred species being assigned the highest number. For example, in a list of 20 species, the most threatened species is rated '20' while the least threatened species is rated '1'.

To obtain a representative selection of species, the professionals who possess an extensive knowledge of the occurrence, distribution, growing conditions, methods of collection, use, cross-boarder trade, risk factors and quantity of medicinal plants used in the *gso-ba-rig-pa* system were asked to participate.

Self-administered, open questionnaire forms were distributed to a total of 16 participants comprising of Drungtshos (Traditional Physician), procurement staffs and researchers, all of whom have been working with the ITMS for several years. They have made numerous field trips in the last 20 to 25 years to identify, collect and explore the availability of medicinal plants within the country.

These participants were asked to: first list the medicinal plants that grow exclusively in Bhutan; secondly to rank 20 medicinal species in terms of vulnerability (sustainability) basing their judgement on personal perception and field experiences, and thirdly to identify the possible risk factors that may affect the sustainable use of medicinal plants and

the reasons why. Of the original 16 potential participants, 10 people answered and returned the completed questionnaire forms.

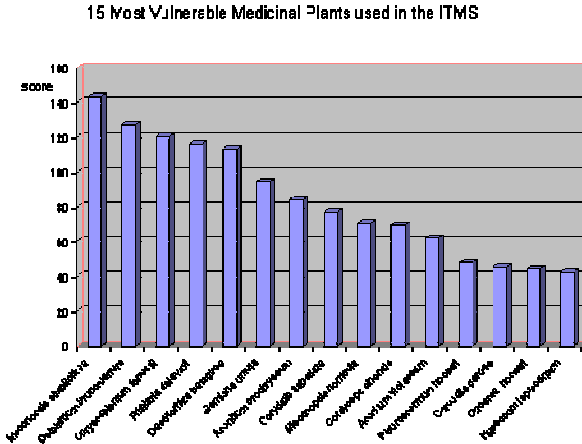
Result and Discussion

Fifteen most vulnerable species of medicinal plants

A total number of 153 MAPs were identified during the free listing by the 10 professionals involved in the survey. Almost 90% of these species are currently used in the ITMS. As to the ranking of vulnerable species, most of the participants ranked 20 species in response to the request; some listed 15 species, while one participant mentioned only 10 species. For this reason, the first 15 species with the highest scores were identified as the most vulnerable species of medicinal plants. Among them, *Meconopsis simplicifolia* (D.Don) Walpers ranked first in its score and is considered the most threatened species. Ironically, this species consumption by ITMS is comparatively low. The scoring result of the first 15 species is shown in Figure 1.

All 15 vulnerable species are high altitude medicinal herbs found in fragile ecosystems of the Himalayas between 3,000 to 5,500 meters above sea level. Interestingly, the annual consumption of these plants in the ITMS is relatively low. After analysing the ITMS raw material input data for the last nine years (1999-2007), the results showed that the yearly mean consumptions of each of these species varies between 0.5 kg (*Corydalis gerdæ* Fedde) to a maximum of 30 kg (*Aconitum ochryseum* Stapf).

Figure 1. Top 15 most vulnerable species of medicinal plants.



Risk factors for the sustainable use of MAPs

The sustainability status of the MAPs reflects a broader understanding of how biological, ecological, social and economic factors are intrinsically interconnected to conservation and development. The dynamics of MAPs sustainability and the associated risk factors are discussed in the light of this interconnectedness. In the questionnaires, the respondents identified approximately 10 risk factors, which are related to the sustainable use of MAPs. These risk factors broadly fall into four categories: biological, ecological, social and economic factors.

1. Biological Factors

Life Form: Many NWFPs currently experience significant levels of commercial exploitation. In general, harvesting

interferes with the life cycle of the species. Life cycle characteristics of the species include the phenology of flowering and fruiting, pollination, seed dispersal, species-species and species-environment interaction. However, the life cycle of many MAPs are often poorly known.

All the priority species included in our study, except *Cordyceps sinensis* (Berk.) Sacc, are either monocarpic or polycarpic perennial herbs. The habitats of these species remain snow covered from October to February. It appears as if the rough and difficult environment with an extreme short period for plant development are likely to give better chances for survival to perennial herbaceous plants than to annual species.

However, in terms of production, the quantity of dried raw materials produced by these herbs, are far less than that produced by trees. For instance, a “total of 5,731 plants of *Meconopsis horridula* Hook.f. & Thomson is required to get 57.31 kg of dry material,” “15,570 number of *Onosma hookeri* Clarke needs to be uprooted to get 33.32 kg of its root,” and “28,186 *Nardostachys grandiflora* DC is needed to be uprooted in order to collect 39.46 kg of its dried roots” (Shawe 1997).

The extraction of perennial plants before they reach sexual maturity increases the species vulnerability. The monocarpic species such as *Meconopsis horridula* Hook.f. & Thomson need two years to reach the flowering stage and the individuals have to produce more offspring than required to replace them, since not all offspring will reach maturity. The plants die once they have produced flowers and set seeds. When such flowering plants are collected indiscriminately, the natural propagation process is interrupted, thereby inhibiting the individual plants from producing offspring.

The endangered perennial herbs *Meconopsis horridula* Hook.f. & Thomson and *Meconopsis simplicifolia* (D.Don) Walpers

produce seeds in large numbers, but germination and seedling recruitment are low, both in natural habitats and under laboratory conditions (Sulaiman and Babu 1996). Removing a large proportion of such species in one year is likely to have a significant impact on the species resiliency. The low seed germination, high seedling mortality and low productivity (quantity) will render most of the priority species endangered in the event of persistent collection.

Harvesting Plant Parts: The extraction of some plant parts has a bigger impact than others, i.e. taking roots are typically more damaging than taking seeds or flowers. It may affect the whole life cycle of the individual plants and produce a number of ecological impacts. For instance, persistent harvesting of the root of a single stemmed, sparsely distributed plant may threaten the survival of the species.

The inappropriate harvesting methods of the tubers and bulbs of *Onosma hookeri* Clarke, *Aconitum violaceum* Jacq, *Fritillaria delavayi* Franchet and *Dactylorhiza hatagirea* D.Don or the uprooting of *Meconopsis simplicifolia* (D.Don) Walpers and *Meconopsis horridula* Hook.f. & Thomson in order to collect the aerial parts, obviously removes the whole individual and has a detrimental effect on sustainability. The uprooting of deep-rooted species in a fragile ecosystem would result in soil impoverishment by erosion and deprive the plants from their required nutrients. As a consequence of high frequency collection, length of roots and volumes of root biomass become smaller and lesser.

Similarly, the uncontrolled harvest of seed leads to decreases in seedling establishment. The over-harvesting of flowers may result in fluctuations of species availability in the following years. The debarking of the plants may result into slow death of the whole plant.

Although the immediate result of indiscriminate harvesting of relatively small number of individuals may not be visible, such practices can have a significant impact on long-term sustainability. On the other hand, for the formulation of traditional medicines; the harvest of roots, seeds and flowers of some species is unavoidable. However, for the last 11 years, the annual harvest of high altitude medicinal plants by ITMS has been optimal and sustainable (Tenzin 2008), and the harvest of high value species like *Nardostachys grandiflora* DC may be lower than what is illegally traded.

2. Ecological Factors

Habitat and population density of the species: Studies on distribution patterns of medicinal plants were carried out in the neighbouring countries of India and Nepal but not much investigation has been carried out on distribution and population parameters of MAPs in Bhutan. The first scientific survey for high altitude medicinal plants was conducted in 1997. Only a few important species, based upon their global and perceived local threatened status, were studied at that time.

The plants in high alpine vegetation generally tend to form enormous root systems but hardly grow above the soil. One example of small plants with comparatively big roots is *Gentiana urnula* H.Smith, a species of 7 to 10 cm of height. The important medicinal plants such as *Fritillaria delavayi* Franchet, *Neopicrorhiza scrophulariifolia* (Pennell) Hong, *Onosma hookeri* Clarke and *Nardostachys grandiflora* DC have comparatively large roots. Since the roots of these species are used in the traditional formulations, the whole plants are uprooted. These species are either restricted to alpine scree slopes or inhabit alpine meadows and slopes - all fragile environments. The uprooting damages their habitat and affects the growth of the population.

Vulnerable Medicinal Plants and the Risk Factors

In general, most of the high altitude medicinal plant species occur in low frequency and density. Species with a higher density are mostly restricted to specific habitats. For example, *Delphinium brunonianum* Royle grows only in Chewla in a small pocket area. Likewise, *Meconopsis horridula* Hook.f. & Thomson inhabits only open alpine slopes.

The sustainable use of any plant species depends upon the renewal capacity of the population. To sustain a consistent population pattern, enough seeds or other reproductive material should be available for future regeneration. Although extraction of entire mature individual does not necessarily reduce population size, *ad hoc* inappropriate collection practices exert a considerable influence upon the ecology and the sustainability of natural resources.

In the same way, harvesting a segment of the population may influence the population pattern. For instance, during a survey in 1997 *Dactylorhiza hatagirea* D.Don was found at 0.086 plants per m² in their traditional collection site at Lingshi and the authors argued that harvesting may have contributed to the low density for this species (Shawe, 1997). Currently, ITMS collects *Delphinium brunonianum* Royle from few segments in Lingshi area. As indicated, *D. brunonianum* Royle, grows only in restricted specialized ecological niches. The prolonged harvest of this species from the same locality would endanger the survival of the species in that locality. Species such as *Gentiana urnula* H.Smith, *Corydalis gerdae* Fedde and *Meconopsis horridula* Hook.f. & Thomson have a clumped distribution pattern. If they propagate vegetatively, harvesting part of the clumps may not significantly affect reproduction.

Natural calamities and outbreak of fire: Like other Himalayan countries, the environment in Bhutan is highly vulnerable to glacial lake outburst, avalanches, soil erosion

and the decaying of some Himalayan mountains. Bhutan is a volcanic zone and its eruption may be devastating for any life forms especially alpine herbs. Another destructive phenomenon is fire. Acres of forests are destroyed by fire in Bhutan and valuable medicinal plants are lost. Fire management in Bhutan is made difficult by the rugged terrain and impassable ranges.

These entire natural phenomena contribute to the loss of some plant species in Bhutan. While some phenomena are beyond the control of human beings, at least fire can be prevented and controlled with information dissemination and appropriate fire control strategies and equipment engagement.

Overgrazing: Cattle, yak and sheep rearing is another significant economic mainstay of Bhutan. Overgrazing of the grasslands/forest by such animals - especially yaks - has a detrimental effect on the survival of the grazed plant species. Yaks consume every type of herbage vegetation apart, from a few toxic species and are able to feed on very short growth (Gyamtsho 1996).

They have an ability to negotiate narrow footpaths on rocky slopes and consume the herbs and grasses from isolated pockets. Unlike other grazing animals, they cover large areas of grazing ground every day. The intensity of yak overgrazing the alpine and temperate rangeland accelerates the rate of ecological destruction. For example, intense browsing by yaks checks the growth of seedlings of the Himalayan yew, *Taxus baccata* Linnaeus (Norbu 1996). The pastures around Laya, Lungo, Jarila and Lingshi are already affected by the grazing activities of large herds of yaks joined by flocks of blue sheep and marmots (Gyamtsho 1996).

Most of the important medicinal plants, e.g. *Meconopsis horridula* Hook.f. & Thomson, *Meconopsis simplicifolia* (D. Don) Walpers, *Fritillaria delavayi* Franchet, *Delphinium*

brunonianum Royle and *Corydalis gerdæ* Fedde in the country are restricted to delicate and specialised habitats. The intensive overgrazing, if not monitored, could lead to more habitat destruction and shrinkage of the natural population sizes of the valued medicinal plants.

Besides, some plant species like *Senecio* and the *Ligularia* which contain pyrrolizidine alkaloids that may be of medicinal values, are found to be toxic to yaks and cattle (Winter et al 1994). Such poisonous plants are cleared by cattle herders in order to protect the cattle. This destructive act also significantly contributes to the extinction of many alkaloid-containing MAP species.

3. Economic Factors

Commercialisation: The unpolluted environment and environmentally friendly cultivation practices provide Bhutan with a unique advantage for marketing the MAPs and its derivatives. Many medicinal plants such as *Aquilaria agallocha* Roxb., *Ephedra gerardiana* Stapf *Rauwolfia serpentina* (L.) Benth. ex Kurz., *Taxus baccata* Linnaeus, *Rheum nobile* Hook.f. & Thomson, *Rheum acuminatum* Hook.f. & Thomson, *Neopicrorhiza scrophulariifolia* (Pennell) Hong, *Nardostachys grandiflora* DC, *Aconitum spicatum* (Bruehl) Stapf, *Artemisia* species, *Panax pseudo-ginseng* Wall. sub sp. *himalaicus* H.Hara and *Cordyceps sinensis* (Berk.) Sacc are in high demand for pharmaceuticals and have potential international market value (Ngawang, 1996).

Bhutan has already legalised the trading of few species like *Cordyceps sinensis* (Berk.) Sacc, *Swertia chirayita* (Roxb.ex Flem.) Karsten, *Piper mullesua* D.Don and the oil extraction from the lemon grass. It is also rumoured that *Neopicrorhiza scrophulariifolia* (Pennell) Hong and *Nardostachys grandiflora* DC are traded but no data support this.

The legalisation of *Cordyceps sinensis* (Berk.) Sace harvesting has improved the livelihood of highlanders. All the family members, above the age of 18, can collect the *Cordyceps* for a period of one month (May) in a year. In 2008, a kilogram of *Cordyceps sinensis* (Berk.) Sace fetched as high as Nu. 221,000 a kg (approximately US\$5,262) but compared to 2007 (which was Nu. 400,000 a kg), the price had gone down (Gyeltshen 2008). The business of Cordyceps in Bhutan is solely determined by the international market trends and so far it has been lucrative. However, the impact of collection, its biological characteristics and ecological sustainability are yet unknown. But definitely, pressure on the species is increasing. It is reported that the regeneration span of a caterpillar in the same area is at least four years (Dhendup, 2008) and if this is the case, sustainability of Cordyceps remains foggy.

In the temperate and sub-tropical forests of Bhutan, logging activities are common. Although it is said to be managed properly, many valuable medicinal plants are destroyed in the process.

When economic forces become a reality, people's interest in maximising their income could jeopardise their concern for a sustainable harvest of MAPs from the wild. Concomitant with the globalisation of market economics and increase in demand, the rate of demand and utilisation of MAPs will expand and their sustainability, especially the vulnerable species, can be threatened.

Multiple use and commercial diversification: The impact of multiple uses exerts intense pressure on some plant resources. The MAPs are extensively used as incense, fruits, dyes, resins, vegetables, spices, oils, fodder, firewood, in rituals and as ornamental plants. Until this date; about 181 fodder plants, 107 ornamental plants, 97 fruit and nut species, 77 forest vegetables, 40 incense aromatic plants, 36 natural dyes, 25 oil/resin species, 20 spice species and 12

Vulnerable Medicinal Plants and the Risk Factors

food crops have been identified (Tshering D 2006) and most of them are medicinal plants.

The local markets in Bhutan are flooded with MAPs like the roots of *Nardostachys grandiflora* DC, leaves and stems of *Rhododendron ciliatum* Hook.f, *Rhododendron setosum* D.Don, and aerial parts of *Tanacetum nubigenum* Wall for use as incenses. The *Rhododendron* and *Nardostachys* species are mixed together and widely used in religious rituals. Most of the raw medicinal species sold in the local markets as incense are often collected indiscriminately, with no consideration for future regeneration. This trend would increase as more and more small-scale incense making industries and private sectors which are dependent on NWFP are encouraged by the government. There are already 17 licensed incense entrepreneurs in Bhutan (Tideman, 2006). It is reported that most of the raw materials currently used for incense making in Bhutan are imported from India. But it is more likely that illegal extraction and trade of selected incense plant materials are taking place.

The stem of some medicinal plants like *Juniperus squamata* D.Don and *Juniperus pseudo-sabina* Fisch are commonly used as incense, sacred artefacts for Statues, and as firewood. *Rhododendron anthopogon* D.Don, *Bombax ceiba* L. and *Cinnamomum obtusifolium* Nees are often cut down for use as firewood. The root of *Onosma hookeri* Clarke and *Rubia cordifolia* L, important medicinal plants, are used locally as natural dyes.

A number of medicinal plants are eatable and serve as a food resource. This may be more common in rural communities. When rain does not fall, when the water becomes scanty and when the yield from the farmland cannot support the lives of the rural farmers, it is the only choice for them to turn to the forest for food supplies. Fruits and nuts from *Phyllanthus*

emblica L., *Terminalia chebula* Retz., *Terminalia bellerica* (Gaertn.) Roxb. and *Butea buteiformis* (Voigt) Grierson & Long etc. are often plucked, eaten and collected by rural people passing through the forests. *Asparagus racemosus* Willd., *Adhatoda vasica* Nees, *Allium macranthum* Baker, *Taraxacum officinalis* Wigg., etc are used as vegetables and spices. Few species of medicinal plants are used as tea leaf. The oil is sometime extracted from the seeds and nuts of some medicinal plants. Some of these edible wild plants are occasionally marketed in the Thimphu vegetable market.

Nardostachys grandiflora DC, *Rhododendron ciliatum* Hook.f., *Rhododendron setosum* D.Don, *Hippophae rhamnoides* Linn., *Dactylorhiza hatagirea* D.Don, *Meconopsis horridula* Hook.f. & Thomson, *Corydalis calliantha* Long, *Juniperus* species, etc are considered important ornamental plants in Bhutan (Chhetri, 1996). In fact, the Japan-Himalayan Company, which was established in 1990, is the pioneer of this ornamental plant business in Bhutan and has exported *Cupressus*, *Gaultheria*, *Edgeworthia* species to Japan at 60-100 yen per cutting (Chhetri, 1996). Many medicinal plants used by the ITMS are also part of the pharmacopoeia of traditional medical systems of neighbouring countries and again this means extra value and more demand for these species.

As indicated above, many plants are used for multi-purposes. The intrinsic value of a plant gets multiplied with its many uses, thereby increasing their risk of over-exploitation. The market trends determine the market values of the plants. The intensity and impact of exploitation on those species could subsequently speed up with the rise in market value. Hence the multiple use and commercial diversification of medicinal plants, if extended and intensified, would surely have an impact on the sustainability of MAPs in Bhutan.

4. Social Factors

Poaching and Illegitimate Trade: Illegitimate harvest puts selective pressure on the species collected. These activities seem to have increased in recent years. Although illegitimate harvest and cross-border trade involves only a few species, high proportions are of conservation concern. For instance, two important species, *Cordyceps sinensis* (Berk.) Sacc and *Fritillaria delavayi* Franchet, are the subject of considerable cross-border trade. Because of the high price and increased demand in other traditional medicines, these species are hunted illegally and are traded across the borders. Since these species are uprooted, the plants are highly susceptible to the impact of illegitimate harvest. *Neopicrorhiza scrophulariifolia* (Pennell) Hong is also extensively collected. The rare species *Delphinium glaciale* Hook.f. & Thomson, *Delphinium brunonianum* Royle, *Nardostachys grandiflora* DC and other medicinal plants like *Rhododendron ciliatum* Hook.f., *Rhododendron setosum* D.Don, and *Tanacetum nubigenum* Wall are traded illegally as incense. While only parts are removed from some plants, many species like *Nardostachys grandiflora* DC, *Neopicrorhiza scrophulariifolia* (Pennell) Hong and *Fritillaria delavayi* Franchet are uprooted.

The sparse data available on the amount of illegally harvested medicinal plants indicates that any that for every one species that is harvested officially, ten are harvested unofficially. (Shawe, 1997). If these illegal activities are not controlled, the gradual disappearance of some species is likely.

On the other hand, the level of forest staff in rural districts are insufficient to manage or control the vast forest areas, which is made even more difficult by the rough undulating impassable terrain of the country. In fact, these difficult terrains have served as the nesting place for illegal harvesters in the country.

Human Population Expansion: The current population of Bhutan is 646,851 and the fertility rate is 2.6 percent (NSB 2007). This figure looks small compared to the populations of other countries. But given the small size of a country (38,394 square kilometres), most of which are rugged mountains that are often prone to landslides, and also given the high fertility rate, the population is an issue of concern in Bhutan. The National Statistics Bureau of Bhutan projects the population figure to rise to 886,523 by 2030. This increase in the human population will inevitably exert an increased pressure on the country's natural resources including MAPs.

Human population density in Bhutan's high altitude regions, where the share of medicinal plant growth is high, is much lower than in neighbouring Himalayan countries. But this does not mean that the impact is not felt. Even in those high altitude regions, the local population has been rapidly increasing as a result of better child health care, improved nutrition and implementation of development activities. In fact, this segment of the population has an inherent impact on the MAPs of Bhutan exerted either through their settlement and farming practices or through the related economic activities.

Thus, the overall repercussions of population expansion in relation to medicinal plants in Bhutan are - the increased MAPs trade and demand, over exploitation, habitat loss, and ecological failure undermining the sustainability of the MAPs, especially the rare and high value medicinal plants.

Access to markets: The high altitude areas are accessible only by foot and it often take days or even weeks to reach them. Improving the existing mule tract would facilitate the implementation of development and conservation programme. Concurrently, improved roads enable rural people to get to larger customers. In other words, the income of local communities from MAPs could rise with more access to markets. On the other hand, an easy access to valued

medicinal plants could potentially affect their sustainability negatively.

Social issues such as land tenure have a lasting impact on the rangeland. Generally people recognise and safeguard a resource base, which they own. An open access to resources by the outsiders is often detrimental. An unambiguous delineation of land use rights for the local communities would most likely support future sustainability of MAPs in Bhutan.

In the face of income generation, many governmental institutions and non-governmental organisations are encouraging biological, especially MAPs, utilisations in Bhutan. The Marketing Sections at the ITMS and the Ministry of Agriculture are exploring markets for the NWFP and disseminating the market information to the farmers and traders. While the information on market accessibility would give local producers and collectors a stronger bargaining power with the traders, it is more likely that, due to their overpowering greed, this may lead to the indiscriminate and unscientific collection of MAPs.

Conclusion and Future Direction

Our study identified the 15 most vulnerable species of medicinal plants (of those collected by ITMS) and 10 risk factors which are divisible into four major groups for the sustainable use of MAPs in Bhutan. This may not be the true picture since our finding is more or less based on those MAPs in and around Lingzhi and do not reflect the MAP profile of the whole country. Thus, one should be careful to make broad generalisations regarding their sustainability, since it will be necessary to undertake location specific assessments in at least a representative sample of areas to get the overall population picture of these 15 species in the country. Furthermore, some Bhutanese medicinal plants are instead

procured from India, thus minimising the threat against the survival of the plants in Bhutan.

However, it may be safer to assume that there is increasing pressure on the medicinal plants in general and on the 15 identified species in particular.

Among the four major risk factors identified; economical and social factors could be more detrimental to MAPs in Bhutan than the other factors. Nevertheless, they shouldn't be considered in isolation as the factors are interconnected and affect each others. Although risk factors put pressure on the sustainability of MAPs in Bhutan, sound policies on conservation, protection and management in the country are put in place to counterbalance this.

It is an advantage that collection of medicinal plants, including these 15 high priority species, by ITMS are regulated through "Special Permits" issued annually by the Department of Forest under Ministry of Agriculture. Moreover, over the years MAP Section (MAPS) under Ministry of Agriculture and ITMS have jointly initiated the MAPs domestication program and training of farmers on the "Good Collection/Harvesting Practices" and "Post Harvest Care". Recently, based on these cumulative farmer training experiences, MAPS and ITMS jointly developed a "Guidelines for Identification and Collection of 26 Medicinal Plants (Krug and Milliken 2008) and it is expected to help in educating the collectors (farmers) of ITMS.

In fact, farmers are now more aware of MAPs sustainability and they use less destructive harvesting techniques. So, assuming collection is presently within a sustainable range, it can be hypothesised that if current demand and prices offered by ITMS remain at its current level, collectors will protect their source of income against overexploitation.

Vulnerable Medicinal Plants and the Risk Factors

The NWFP Task Force, where the first author is also a member, has already endorsed the development of “National Strategy for NWFP Development in Bhutan (2008-2020)”. This body also started developing guidelines for resource assessment and their management of the economically potential species like *Piper mullesua* D.Don and *Swertia chirayita* (Roxb.ex Flem.) Karsten.

While most of the 15 vulnerable species described in this paper are included in the “Guidelines for Identification and Collection of 26 Prioritised Medicinal Plants” (Krug and Milliken 2008), it will be also appropriate to include them in the list of NWFP priority species and accordingly develop guidelines for resource assessment and their management. The identification of risk factors in the present study is expected to help in devising such strategic guidelines and management plans for other MAPs in Bhutan. While it is the responsibility of the DoF to carry out resource assessment, inventories and develop management guidelines for NWFPs in Bhutan; there are lots of challenges for them. They lack expertise on all the NWFPs, especially MAPs, and this is complicated by the fact that there are huge numbers of NWFP species that cannot be handled by the limited staffs they have. Hence, developing such guidelines and data pool for all the 300 MAPs is a Herculean task. Nonetheless, DoF should co-ordinate with different stakeholders and let them initiate the process. In the case of the MAPs, the 15 identified species would be a starting point.

The perspective for improvement of the sustainable use of MAPs would indeed be determined by the robustness of the implementing body. This robustness can only be achieved if adequate information exists on the MAPs biological and ecological characteristics, the plants vulnerability and on the socio-economic and political dynamics. This is currently lacking in Bhutan. In the absence of this information, the

implementing body is faced with dilemmas over their decisions for utilisations of MAPs. It is therefore important to: conduct MAPs inventories, determine their abundance, gather ethno-medical and ethno-botanical information, assess the impact of current collection practices, enhance research into MAPs and establish databases.

Some legal frameworks need adaptations and revisions to facilitate sustainability and meaningful utilisation. Changes in the resource base combined with changes in operational rules would indicate adaptation and could render sustainable management probable, where as a static rule system could be an indicator that adaptation to an inherently dynamic resource is not taking place; rules and physical attributes could be incongruent, leading to either inefficient use or depletion of the resources (Larsen, 2002).

When the illegitimate cross-border trade and illegal collection of high value MAPs are commonly taking place, it is only appropriate that these illegally traded species are legalised for collection and encouraged for domestication by the Bhutanese people. At least this way, our people can generate income and alleviate their poverty. At the same time, since the exploitation of MAPs by the illegal traders across the borders are of conservation concern, enough forest guards should be stationed there to strictly monitor and guard the resources.

All these gaps and challenges in terms of information pool, research capacity, legal implementation, management and utilisation plans should be addressed as soon as possible. This could be done successfully only if different MAPs stakeholders join forces. Examples of this are seen between ITMS and MAPS, which jointly domesticated and introduced a list of important species in different regions in Bhutan. In collaboration with ITMS, the MAPS at Yusipang in the western region focuses on medicinal plants that grow in mid and high elevation, whilst the MAPS at Mongar in the East

Vulnerable Medicinal Plants and the Risk Factors

concentrates on low altitude species. Consequently, the herb gardens were established at Lingshi (4,000 meters above sea level) and at Lingmithang (600 meters above sea level).

A germplasm collection of over 53 species has been established, and a total of 13 species have been successfully propagated and subsequently distributed to farmers or planted out in on-station trials. While the compatibility of community development and the sustainable use of MAPs through such domestication are yet to be seen, it is definitely an optimistic indication that domestication is possible and would reduce pressure on selected wild populations.

Therefore, there is urgent need to strengthen similar collaboration and improve networks among the stakeholders encompassing farmers, government institutions, national and international organisations, NGOs and other agencies and projects involved in conservation and management of MAPs in Bhutan. In spite of all the emerging positive trends occurring inside these different organisations, there are not much cross-disciplinary collaborations and sharing of information.

As a result, there are duplications in the MAPs initiatives thereby leading to wastages of government resources. For the success of any MAPs sustainability schemes and programs, it is also imperative that farmers, local healers, cattle and yak herders and relevant private organisations, who are directly or indirectly involved in MAP activities, are included in the decision making process.

From our experiences and also based on the experiences of Community Forest Management initiated by the Social Forestry Services; sustainability of MAPs would become more robust if government lands, which host MAPs, are leased to those enterprises dealing with MAPs.

These enterprises may include government organisation, private enterprises and the rural communities or farmer associations. Included in the leasing agreements are accessibility rights and the responsibilities for proper management, conservation and utilisation; and these should be vigilantly monitored, evaluated and regulated by the responsible government organisations.

Bhutan is known for her richness in MAPs resources and there are lots of potentials including that of bio-prospecting. However, many Bhutanese and also outsiders feel that not much has been utilised so far. A high proportion of the rural population lives under the poverty line, and engaging them in the MAPs business with strategic management and conservation plans, would be a right approach to eradicate their poverty. It is therefore crucial to speed up research into domestication, cultivation and ecological sustainability of MAPs; reinforce in situ and ex situ conservation; enforce legal frameworks weighing beneficence over risks, and allow sustainable utilisation of MAPs in Bhutan. This requires a huge financing, but perhaps the revenue generated by eco-tourism could be used for rural community development through conservation, protection and enhancing the sustainable use of MAPs in Bhutan.

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