# Green Tibet

Annual Newsletter 2012
Environment & Development Desk

Environment and Development Desk was established in March 1990 at the Department of Information and International Relations (DIIR). EDD goal is to safeguard Tibet's Environment and to support its role to function a healthy global environment.

EDD's sphere of activities are mainly focused on Tibet, and its objectives are:

1. To monitor and research on environment and development issues inside Tibet.

2. Dissemination of precise and latest information related to the Tibet's environment and development.

3. Create strong network with various Tibet Support Groups (TSGs) and other Environmental Non-governmental Organizations (ENGOs), especially from the Southeast Asian countries.

4. Educating and creating awareness to the Tibetans inside Tibet regarding their legal right and responsibility to safeguard Tibet's environment as stipulated in the constitution of Peoples Republic of China and the Law of Regional National Autonomy

Compiled & Edited by
Chokyi

Dear Friends,

EDD dedicated this fiscal year to Community Awareness Program on ecological destruction on Tibetan Plateau in the Tibetan Settlements and monasteries in India. Tibetan settlements in South India which has some of the largest exile population were covered under this program. EDD executive head, Mr. Tenzin Norbu attended the World Parliamentarians Convention on Tibet held in Ottawa, Canada and UNFCCC COP 18 held in Doha, raising issues concerning Tibet's environment.

Tibet's environment issue was also raised at the Rio Earth Summit held in Brazil, wherein EDD Staff, Mr. Tempa Gyaltsen took active participation.

On the World environment day, EDD took part in events organized by local Indian ENGO and 4th Khoryug conference on environmental protection for Tibetan Buddhist monasteries, nunneries and dharma centers. Participants were informed about the environmental threats currently facing the world in general and Tibetan Plateau in particular. EDD also participated for the first time at the Eleventh Meeting of the Conference of the Parties to the Convention on Biological Diversity held in Hyderabad in India. Its staff voiced concerns, raised awareness and urged the parties and NGOs to help protect the unique biodiversity of the Tibetan Plateau.

A series of briefing papers on environmental and development issues of Tibet were released (in electronic version) which can be downloaded at http://tibet.net/publications/

EDD is indebted to Gabriel Laffittee for his contribution of valuable books and article for our research and his timely guidance. EDD also extends its gratitude to those anonymous researchers who assist in our daily research, be it providing picture or editing our papers.

# Editorial

Dear Readers,

Tashi delek and warm greetings from the Environment and Development Desk (EDD)

We hope the Green Tibet of EDD brings to you all the latest news and information that concerns Tibetans and humanity at large.

This year, the Tibetan Plateau like past many years faced the wrath of rampant mining projects that ripped apart its natural landscape with no consent or participation of the local Tibetans. Mining in Tibet in recent years has greatly expanded particularly in areas where the local Tibetans place high religious values and where even walking on such site is considered against their religious sentiments.The Tibetans have stood firm against such mining projects resulting in arrests and harassment by the police. A case of gunshot was also reported from the Markham County in 'Tibet Autonomous Region', where thousands of Tibetans waved towards the mining site to call off the exploitation of their resources.

Another 'development' the Chinese government aims to bring in was a theme park in Lhasa, which will promote a mass tourism threatening the Tibetan environment and culture. Some Tibet support groups are calling off what in their term is "Disneyfication of Tibet". The $ 4.8 billion theme park is said to open in the next five years. Some call it one of China's four most wasteful infrastructure projects of 2012.

A new study from Penn state reported that the Tibetan Plateau began to develop as much earlier than the previous studies indicated. According to experts, with the constant motion of earth's plates as fast as fingernails grow the rising of the Tibetan Plateau will certainly come to its sustained height, which means the eastern and western lowland of the plateau will stretch out rather than thrusting up. In such a geologically complex region Beijing has built many large and mega dams putting the whole region at risk of earthquake. China in its 12th five-year plan proposed to build 120 Gigawatts of hydro power plants on the Tibetan rivers in the next five years. This means building more than one new three gorges dam every year between 2011 and 2015.

Nomads resettlement under the recent policy '*Tuimu Huancao*' (Retire grazing/livestock to restore grassland) continues in full swing with more than a million Tibetan nomads already settled. Subsistence living is hard in the new settlement with no reliable income sources. The newly settled nomads scour surrounding hills for Caterpillar Fungus (Yartsa Gunbu) to generate income as the fungus fetches high prices in market for its invaluable contribution to the Chinese traditional medicine. Extensive harvest of the fungus raise questions about its sustainability. Find in this issue a more detailed report of Tibet's other environment and development issues.

We wish our readers a very Happy New Year. May this be the year when Tibet sees a glimmer of hope that the current environmental devastation can be reversed.

**Tibetan Villagers Halt Mining Project on Sacred Mountain**

By John Ahni Schertow • Jan 28, 2012

In Tibetan culture, where people live in intimate relationship with the natural world around them, reality and mythology have a way of blending together. So it was perhaps no surprise to local villagers when, after a Chinese mining company and local authorities repeatedly repelled efforts stop a gold mining project on the slopes of holy Mount Kawagebo, the mountain appeared to strike back.

Mount Kawagebo, so sacred that climbing is banned, sits on the border between Tibet and China's Yunnan Province; its eastern side is part of the Three Parallel Rivers of Yunnan Protected Area UNESCO World Heritage site. In February 2011, a small gold-mining operation started near the village of Abin, which is on the western side of Kawagebo, along the path of an 800-year-old pilgrimage route that circles the mountain, attracting tens of thousands of Tibetans annually. To the local people, who believe strongly in the sacredness of Mount Kawagebo, direct destruction of the mountain body, through activities like mining, is unthinkable. Further, villagers said the project was started without permission or prior consent. Thus began a community effort to halt the project.

Villagers said their attempts to deal directly with the mining company resulted in threats and violence from agents hired by the company, and harassment and arrests by local police. On two occasions, men armed with wooden sticks with nails attacked villagers, injuring more than a dozen.

After efforts to negotiate with the local government failed, villagers pushed $300,000 worth of mining equipment into the Nu River. A leader of the group was arrested, but later released when 100 villagers surrounded the local police station where he was being held. A few months later, however, mining resumed and tensions grew. Harassment, death threats and attacks on villagers increased, and some women and children fled to other villages to escape the violence.

On January 20, 2012, a village leader who had tried to confront the mining company was ambushed by local police, tased and arrested. Some 200 community members surrounded the police station, and an ensuing riot resulted in violence and injuries on both sides, with at least one villager sent to the hospital with serious injuries. The leader was released, but protests continued as villagers demanded closure of the mine, and hundreds more villagers from the surrounding area joined in.

This time, the local government held negotiations with the community, including the just-released leader, on behalf of the mining company, whose boss had reportedly fled the area. Villagers involved in negotiations said they were offered money in exchange for allowing the mining to continue, but they refused. On January 23, with tensions mounting, a vice-official from the prefecture government ordered the mine closed and the equipment trucked out of the village.

While the persistence of the community to protect its holy mountain ultimately paid off, some villagers suggested the mountain itself had a role to play. During the negotiations, many reported hearing the sound of a trumpet shell—used in Tibetan religious rituals—coming from the mountain, while others reported unusually windy weather, which stopped once the conflict was resolved.

A Tibetan hired to provide catering to the mine workers described being struck by a physical pressure that forced him to drop what he was carrying; only after he prayed did the sensation disappear. Several months earlier, according to another account, a village leader who had accepted bribes from the mining company died suddenly, and a member of his family was seriously injured in an accident.

He Ran Gao, a researcher who works for the Chinese NGO Green Earth Volunteers and has been closely involved with the communities of the area, described the context of these supernatural accounts. "In a place like Tibet, people have an unusual sense of divinity in nature, based on a whole system of worship and interaction, which sometime seems superstitious to modern citizens,"

she said. "But it is not necessarily irrational or unreasonable."
This sense of nature worship, Gao said, with its attendant conservation values, is "barely left due to past communism and later economic development." But in the Himalayas and other mountain areas, where non-Han ethnicities reside and remain somewhat protected, those traditional values can still be found. She described Kawagebo as a success story showing "how sacred nature can be" and how it can "still be respected, protected and continue to make an impact in people's lives."
Unfortunately, Abin is but one of many villages threatened by mining activities—in most other cases, marble quarrying—and a greater overarching threat to the region: hydroelectric dam development.
Along the Nu (Salween) River, the longest free-flowing river in mainland Southeast Asia, a proposed 13-dam cascade—including several dams in or very close to the World Heritage site—would wipe out portions of the pilgrimage route around Mount Kawagebo and displace the communities of the river valley, likely dealing a blow to their traditional culture as well. Although the project was put on hold in 2004 in the wake of widespread protest, it is certainly not dead.
Last year, the World Heritage Committee issued a statement expressing concern over reports of unapproved construction under way at one dam site on the Nu River, and surveying work—including road-building and drilling—at three others. It warned that "the many proposed dams could cumulatively constitute a potential danger to the property's Outstanding Universal Value."
The committee asked China to submit by February 1 of this year a detailed list of all proposed dams, as well as mines, that could affect the World Heritage property, along with the environmental impact assessments of any proposed projects, prior to their approval. The committee also requested, by the same deadline, a report on the state of conservation of the property and on the progress made in completing a strategic environmental impact assessment on all of the proposed dams and related development that could impact the site's World Heritage value.

Source: http://intercontinentalcry.org/tibetan-villagers-halt-mining-project-on-sacred-mountain/

**Glaciologists to target third pole**

**By Jane Qiu. 02 April 2012**

With the health of the world's highest glaciers in dispute, an international team is planning a long-term campaign to measure the vital signs of the ice atop Tibet and its surrounding mountains.
The 46,000 or so glaciers in the region — known as the Third Pole — supply water to some 1.4 billion people in southern and central Asia, and although many climate studies suggest that the ice is disappearing fast, not all measurements are so dire. Now, the Third Pole Environment (TPE) programme, an international effort to assess the effect of climate change in the region, aims to get some answers by monitoring 25 of the glaciers, which project leaders plan to identify in coming weeks.
Starting later this year, a team led by researchers from Asia will survey the glaciers twice a year and use satellite measurements to look for changes in mass balance — the sum of the snowfall that builds up the glaciers and the melting that shrinks them.
The study sites have been chosen to help tease apart the key factors in a glacier's fate — such as elevation, topography, geographical setting, climate and the type of debris that covers the ice.
"The flagship glaciers are pieces of the puzzle of climate responses on the Third Pole," says Yao Tandong, director of the Chinese Academy of Sciences' Institute of Tibetan Plateau Research (ITP) in Beijing, and chairman of the TPE's science committee. Using standardized methods at each site, the team hopes to discern how glaciers in different parts of the Third Pole are responding, and what is driving the changes. The team will put the information collected during the study into a public database after a proprietary period of a couple of years, says Yao.
A 2007 report from the Intergovernmental Panel on Climate Change projected that Himalayan glaciers could disappear as early as 2035 — but that claim turned out to be baseless. "The exact health status of the glaciers is still an unsettled

issue," says ShresthTayal, a glaciologist at the Energy and Resources Institute in New Delhi. Researchers currently tend to rely on satellite measurements of the region's glaciers to keep tabs on the glaciers' surface areas and end points. "This can be misleading," says TianLide, a glaciologist at the ITP, who has been conducting field measurements of glacier mass balance for two decades. "Some glaciers may have the same or even increased surface area but are in fact thinning."

A 2010 study using measurements taken by the Gravity Recovery and Climate Experiment (GRACE) satellite mission indicated that the Third Pole is shedding roughly 50 gigatonnes of ice per year[1]. And an unpublished inventory of Tibetan glaciers led by Liu Shiyin at the Cold and Arid Regions Environmental and Engineering Research Institute in Lanzhou, China, shows that more than 70% of the glaciers on the Tibetan plateau are retreating. But an analysis[2] this year of GRACE data suggests that overall, high-altitude Asian glaciers are losing ice only one-tenth as fast as the previous estimates, and that those in the Tibetan Plateau are actually growing on average.

**High-stakes data**

Yet many glaciologists are sceptical about the latest GRACE results. "When satellite data are in stark contrast to what many glaciologists have experienced through decades of field research, one must question their validity," says Pradeep Mool, a remote-sensing expert at the International Centre for Integrated Mountain Development in Kathmandu, Nepal.

Detailed analyses of 25 glaciers will not settle the controversy, but "they're a good starting point", says glaciologist Koji Fujita at Nagoya University in Japan. As well as assessing mass balance, the team will set up several comprehensive observatories to monitor the weather and solar radiation and measure properties of the snow, soil and ice, says Daqing Yang, a hydrologist at Environment Canada in Gatineau, who is involved in the study. It will also test methods for measuring snow amounts at high elevations — "a missing but badly needed piece of information in mountain research", says Yang.

Imtiaz Rangwala, a climatologist at Rutgers University in New Brunswick, New Jersey, who is not involved in the TPE, says that the stations may help to resolve a pressing problem about climate change in high regions. Many climate simulations suggest that higher elevations will warm faster than lower ones, but Rangwala and his colleague James Miller reported last month that many mountain regions do not follow such a clear pattern[3]. The campaign, he says "will bridge a major knowledge gap in mountain research, especially at a time when high-elevation observatory stations elsewhere are at risk of being closed down due to lack of funding".

Source: http://www.nature.com/news/glaciologists-to-target-third-pole-1.10382

**China defends £3bn Tibet theme park**

By Tom Phillips. 16 Jul 2012

Plans to build the theme park on the outskirts of Lhasa, the capital of the Tibetan Autonomous Region, were unveiled last week and are part of a government drive to attract 15 million tourists to the region by 2015.

Campaigners warn that promotion of mass-tourism could prove ruinous for Tibet's environment and culture and brings few economic benefits for the Tibetans themselves.

But Monday's edition of the Global Times, widely seen as a mouthpiece for the views of China's Communist Party, delivered a strongly worded rebuke to critics.

"Ordinary Tibetans do not want to live in a backwater museum to be exhibited to foreign visitors who can appraise how well their culture is 'preserved'," argued the article, written by commentator Chen Chenchen.

"The latest grand tourist project will further fuel the local economy and provide more opportunities for direct interaction between locals and visitors Economic growth and cultural prosperity are not in opposition."

Mr Chen rejected claims that developing China's western region posed a threat to traditional Tibetan culture.

"If Han [Chinese] culture is a form of invasion what about the intrusion of US culture in China, from Disney to hamburgers? Is this also a form of cultural genocide?"

The announcement of plans for the theme park comes at a time of increasing instability in Tibetan areas of west China, where campaigners say more than 40 Tibetans have self-immolated over the last 18 months. [*The number raised now to 95 as on 25 Dec. 2012*]

Last week London-based campaigning group Free Tibet claimed there had been a "heavy security crackdown" in Damshung county, near Lhasa, after a 22-year-old Tibetan man set himself on fire in protest against the Chinese government.

Stephanie Brigden, Free Tibet's director, said the "Disneyfication of Tibet" through mass tourism projects would do little to improve the situation.

"We are not opposed to development per se but this type of [large-scale] tourism will not benefit Tibetans and will actually further marginalise [them]. Any kind of development within Tibet has to be inclusive of an informed by the opinions of Tibetans."

"[The government] believes that economic growth is the way to secure harmony [but] economic growth in itself does not bring harmony," she added.

Mr Chen said it was "increasingly impossible that a bulwark can be erected to "protect" the Tibetan culture from external impact." "[Whether] Western observers like it or not, the younger generations in Tibet are already making changes to their traditions. They speak Tibetan, and they also browse web pages in Chinese and English. They join in family religious ceremonies, and they also visit nightclubs.

"Tibetan culture is also evolving along a common road that many cultures have already experienced."

Source: http://www.telegraph.co.uk/news/worldnews/asia/tibet/9403121/China-defends-3bn-Tibet-theme-park.html

**Tibetan Shot Dead in Protest**

2012-08-16

Chinese security forces shot dead a Tibetan and detained six others on Wednesday as they dispersed a crowd of 1,000 Tibetans protesting against the resumption of mining operations in a county in Tibet, sources said.

The Tibetans from Choeten town in the Tibet Autonomous Region's Markham county marched to the mining site to underline their opposition to an upcoming project on environmental grounds but faced the wrath of the police, who used tear gas and live fire to disperse the crowd, the sources said.

A male protester named Nyima was killed by gunfire, said Lobsang Palden, a monk in South India, citing contacts in the region.

"He was surrounded by the security forces, and none of the Tibetans could approach him," Palden said. "Many other protesters ran away into the forest to hide and have not returned home."

Six others were detained in the protest staged by "around a thousand people from Markham's Choeten town who went to the mining sites to prevent it [the project]."

**Opposition**

Five of those held were identified as Dawa, Atsong, PhuntsogNyima, JamyangWangmo and KelsangYudron.

A Chinese mining company began to operate in Markham earlier this year but suspended work when Tibetan residents of Choeten, a township of about 11 villages and 3,000 residents, opposed the project, Palden said.

"Yesterday, [the Chinese] came back again, saying that mining would go ahead."

Company employees say they are building an electrical power plant and not extracting resources, "but their work site is on a forested part of the mountain, so the local people don't believe them," Palden said.

"Chinese miners also say that they are working under government orders, and that Tibetans cannot prevent this, but local Tibetans say the work is being done by Chinese private companies collaborating with local authorities."

"Tibetans in Markham have long resisted mining operations, which they believe are bad for the environment," he said.

**Standoffs**

Mining operations in Tibetan regions have led to frequent standoffs with Tibetans who accuse Chinese firms of disrupting sites of spiritual significance and polluting the environment as they extract local wealth.

Last year, China's official media reported that investment in exploration of mineral resources in the Tibet Autonomous Region will be accelerated over a five-year period.

Tibet has large proven and potential reserves of vital deposits but little exploration has been done so far, Xinhua news agency reported.

Initial studies show that the Tibet Autonomous Region has China's largest chromium and copper reserves, while most of its rich iron, gold, silver, potassium, oil and natural gas reserves remain unexploited, the report said.

*Reported by RFA's Tibetan service. Translated by DorjeeDamdul. Written in English by Richard Finney and Parameswaran Ponnudurai.*

*Source:* http://www.rfa.org/english/news/tibet/mine-08162012000425.html

**Tibetans Guard Sacred Mountain**

2012-08-29

Tibetan nomads have driven Chinese gold miners away from a sacred mountain in China's Qinghai province, vowing to give up their lives if necessary to protect the site, the abode of a local god, according to Tibetan sources.

They set fire to the gold miners' tents and launched 24-hour patrols around the mountain located in the Tibetan-populated Gade county in the Golog (in Chinese, Guolo) prefecture in a bid to keep the gold miners at bay, the sources said.

"The nomads are now watching for intruders on the mountain," a Tibetan living in the U.S. told RFA, citing contacts in the region and speaking on condition of anonymity.

The mountain, called Dringye Ngo Sorma, is known for the beauty of the lake at its base, for the green meadows on its slopes, and for other characteristics "typical of a sacred mountain," the source said.

"The deity that lives on the mountain is believed to be very ferocious and powerful," he added.

On Aug. 10, Chinese miners arrived in the valley at the foot of the mountain and made plans to extract gold from the valley, the source said.

And though local government officials warned Tibetan residents of the area not to interfere with the work, the gold miners' tents were set on fire two days later.

"The authorities could not detain the persons involved in the burning, as they had all escaped and gone into hiding," the source said.

**Round-the-clock watch**

On Aug. 14, Tibetans from the four nomadic groups in the area of Tsangkor Sholma gathered at the mountain, but the Chinese miners had by then fled from the area, the source said.

"So the Tibetans conducted a grand smoke-offering ceremony at the site and then went back to their homes."

Two nomadic groups are now watching the lower valley of Dringye Ngo Sorma, while another two groups guard the valley of another mountain, KyuRi, the source said, adding, "So now the Tibetans are watching these valleys around the clock, both day and night."

Tibetan residents of the area have refused all orders to let the mining work proceed and have vowed not to allow the extraction of "even one handful of soil" from the sacred mountain, the source said.

Mining operations in Tibetan regions have led to frequent standoffs with Tibetans who accuse Chinese firms of disrupting sites of spiritual significance and polluting the environment as they extract local wealth.

On Aug. 15, Chinese security forces shot dead a Tibetan and detained six others as they dispersed a crowd of 1,000 Tibetans protesting the resumption of mining operations in Markham county in Tibet, according to Tibetan sources.

Last year, China's official media reported that investment in the exploration of mineral resources in the Tibet Autonomous Region will be accelerated over a five-year period.

Tibet has large proven and potential reserves of vital deposits, but little exploration has been done so far, the Xinhua news agency reported.

Initial studies show that the Tibet Autonomous Region has China's largest chromium and copper reserves, while most of its iron, gold, silver, potassium, oil, and natural gas reserves remain unexplored, the report said.

*Reported by ChakmoTso for RFA's Tibetan service. Translated by Karma Dorjee. Written in English by Richard Finney.*

*Source: http://www.rfa.org/english/news/tibet/guard-08292012161702.html*

**Tibetan Plateau much older than thought, new study finds**

The rise of one of the highest, flattest places on Earth, the Tibetan Plateau in China's Sichuan province, began much earlier than thought, according to a new study.

"Our study suggests that high topography began to develop as early as 30 million years ago, and perhaps was present even earlier," Penn State researcher Eric Kirby said in a statement.
Most researchers believe the high mountains in eastern Tibet developed during the past 10 million to 15 million years as deep crust beneath the central Tibetan Plateau flowed to the surface, thickening the Earth's crust and causing the area to rise, Kirby said. But Kirby and his colleagues used radioactive dating to find the uplift began twice as early.
The study may help scientists better understand the complicated processes going on beneath the Himalayan Mountains and the Tibetan Plateau. The Tibetan Plateau, with an average elevation of about 16,000 feet (4,900 meters), lies at the intersection of the most vigorous collision of continental plates on the planet, where the Indian continental plate rams into the Eurasian plate and dives beneath it.

Kirby looked at samples taken from the hanging wall of the Yingxiu-Beichuan fault, the primary fault responsible for the 2008 Wenchuan earthquake in Sichuan. The researchers used a variety of dating methods, including uranium-thorium radiometric dating, to tease out the ages of the rocks, which tells when they formed and gives clues to when they lifted. This method determines the age of a material by measuring the relative abundance of uranium-234 and thorium-230. The former decays into the latter at a known rate, and by looking at relative levels of each in a given rock layer, scientists can guess the age of the rocks.

The results of the testing, detailed Aug. 5 in the online edition of the journal Nature Geoscience, suggest rocks in the area formed about 30 million to 50 million years ago while undergoing intense erosion. After the collision of the Indian and Eurasian plates began about 50 million years ago, portions of the Tibetan plateau began to lift. As the collision progressed, material from the lithosphere (the solid outer shell of the planet) below the surface crust was pushed toward the east, toward modern-day China. But exactly how and when this happened is a matter of debate. This study suggests this process started earlier than some have assumed.

"These results challenge the idea that the topographic relief along the margin of the plateau developed entirely in the Late Miocene, 5 to 10 million years ago," Kirby said. "The period of rapid erosion between 25 to 30 million years ago could only be sustained if the mountains were not only present but actively growing at this time."

Source: http://www.msnbc.msn.com/id/48707954/ns/technology_and_science-science/#.UC9zUVK4bIV

## China Rushes to Build a New Generation of Mega-dams

2012-09-14

In its rush to find sources of power, China has focused on hydropower. Following the construction of the massive Three Gorges Dam, work is now centered on the Jinsha River in Yunnan Province, where up to 30 dams are currently in the works or being planned. As with the Three Gorges, dams on the Jinsha have raised concerns from environmental activists and residents who are being forced to relocate. The Telegraph got access to one of the largest projects, Xiluodi Dam, which will soon go online:

At the centre of China's latest hydro push is the Jinsha, a murky brown tributary of the world-famous Yangtze. Two vast projects – Xiluodu and Xiangjiaba – will soon go online here, becoming China's second and third biggest dams with joint capacity to produce around 20 GW – enough to power almost all the homes in England. With an installed capacity of 12.6 GW, Xiluodu is one of the biggest hydroelectric projects being built anywhere on earth.

Meanwhile a "cascade" of dozens more dams are planned or already under construction elsewhere on the 1429-mile river.

"The Jinsha is number one right now," said Grumbine, the author of a book about the fight to protect another of Yunnan's rivers. "We are talking about 30 [dams], something like that, and I would think most of them will be built."

The Daily Telegraph was the first western news organisation to be given access to Xiluodu, a 285.5m tall concrete colossus straddling the river border between Yunnan and Sichuan provinces.

Source: http://chinadigitaltimes.net/2012/09/china-rushes-to-build-a-new-generation-of-mega-dams/

## Tibetan Villagers Forced to Move

**2010-12-09**

A Chinese development project will flood farmland and homes, forcing thousands to relocate.

Up to 4,000 Tibetan villagers may be forcibly relocated by Chinese authorities to make way for a hydroelectric project in an area north of Tibet's regional capital Lhasa, according to Tibetan sources.

The project, to be completed in the Phodo area of Lhundrub county in the Tibet Autonomous Region, is set to displace about 500 households, a local Tibetan said, speaking on condition of anonymity.

"That means, as of now, somewhere between 3,000-4,000 people will be affected," the man said.

"The Chinese are building bridges and blocking the flow of the river," he said. "The Chinese have already built houses exclusively for the Chinese soldiers who have arrived to work on the dam."

Some households have already been relocated, with others told they will have to move before the areas in which they live are submerged, the man said.

"They are being told they are not permitted to irrigate or plow their land or harvest any crops … By September next year, all must have moved."

None of the affected families wants to move, the man said, adding, "They fear that they and their animals will suffer from diseases such as diarrhea and from maladjustment to unfamiliar surroundings."

Despite repeated pleas, all have been "coerced" into leaving their homes, the man said.

### Requests denied

Requests that all households be relocated to the same place have also been denied, with some groups now set to be moved to nearby Yulnga, Taglung, and Radreng, and others going to Lhasa.

Family groups sent to Lhasa will face particular hardship due to the largely urban area's lack of grazing land for animals, the man said, adding,

"They will be forced to sell their livestock and leave."

"Each family is supposed to be given a sum of about 10,000 yuan ($ U.S. 1,500) in compensation, but they are being ordered to spend the money to build new houses into which they can move."

Speaking separately, a source outside Tibet confirmed the report, saying he had heard that six towns and villages in the Phodo area are marked for resettlement.

Because three rivers near Phodo—the Radreng, the Lhachig, and the Pachoe—are scheduled to be dammed, he said, not just Phodo itself but also the surrounding county will be affected, he said.

"All the workers at the dam project are Chinese," he added, citing contacts in the area.

"I heard earlier that there are already about a thousand Chinese soldiers in Phodo. On top of that, I now hear another group of two thousand soldiers has arrived."

"Besides adversely affecting people and livestock, historic monuments such as a famous iron-link suspension bridge and a small nunnery will be submerged under water," he said.

Chinese development projects in Tibet have led to frequent standoffs with Tibetans who accuse Chinese firms of disrupting the lives of local people and of polluting and damaging the environment.

*Reported by RFA's Tibetan service. Translations by BenpaTopgyal. Written in English by Richard Finney.*

Source: http://www.rfa.org/english/news/tibet/relocations-12092010131710.html

## TIBET: THE (DEGRADING) THIRD POLE

*"In the old days it is the emperor who lived far away, and was unable to enforce edicts. In the new China, it is the regulators who are distant and ineffectual"*
*– Judith Shapiro (2012)*

With an average elevation of 4500 meters, the Tibetan Plateau is one of the most distinctive land features on this earth. For many generations, this plateau has met the basic necessities of life and flourishing civilizations beyond its vast border. This vast stretch of cold and high elevation plateau is referred to as 'The Third Pole' a home to thousands of glaciers and ice masses besides the two poles. The Tibetan Plateau is also the fountain-head for many rivers that flow into Asia (India, Nepal, Bangladesh, China, Nepal, Pakistan, Thailand, Laos, Myanmar, Cambodia and Vietnam) supporting an estimated 1.3 billion peoples.

Despite its cold and harsh environment, for thousands of years the Tibetan people have lived on this plateau and created cultural landscapes based on the principles of simplicity and non-violence that are in harmony with the environment. Not anymore. The roof of the world is withering away due to climatic warming and industrialization demands imposed by the Chinese communist regime.

### A. Climatic warming's degrading effects on the Tibetan Plateau:

For many scientists, environmentalists and other well-informed individuals, it may not be breaking news that the climate warming in Tibet is taking its toll on glaciers, permafrost, frozen soils, lakes, grasslands and the whole biotic community. On a micro level, its future implications are far more threatening; the ongoing flow of rivers that drains roughly 5.4 million sq. km could become seasonal and the change in the rainfall pattern will affect the livelihoods of tens of millions of people, creating more regional tension.

In the past 40 years, the glaciers on the Tibetan Plateau have shrunk by 6,600 sq km (*as of year 2006*) and it is estimated that they are currently melting at a rate of 7 percent annually. Similarly, a separate study by a NASA scientist (2010) revealed that 20 percent of Tibet's glaciers have retreated in the past 40 years and if the current trend continues, more than 60 percent of the existing glaciers could be gone in the next 40 years. Even China's National Climate Change Program report (2007) has mentioned that the area of glaciers and frozen earth is expected to decrease more rapidly and are estimated that glacier area in western China will decrease by 27.7 percent by the year 2050. The same concerns have been shared by the IPCC *(Intergovernmental Panel on Climate Change)* in its recent report and warned that the concurrent melting at the present rate will result in massive flooding followed by severe droughts.

### B. Land use policies denuding the Tibetan Plateau:

**Deforestation:** The plateau once possessed one of the oldest forest reserves in Central Asia and a wealth of over 5000 species of higher plants, these forests were indiscriminately cut down and transported to China. It was not until the disastrous Drichu *(Yangtse)* flood in 1998 that China realised it was paying the price of stripping Tibet's forest. That flooding killed over 10,000 people and left 240 millions affected by its waters and destroyed over million hectares of farmland and homes in China. Only after the forest had been entirely stripped did the large logging finally stopped in the name of water conservation. Taking remedial action, the government closed timber markets and placed an unconditional logging ban on an area of 4.6 million hectares covering along the Drichu basin in Tibet. Despite the government logging ban announced in September 1998, commercial felling of trees is still prevalent along the Drichu basin up until

year 2012. Even though the Chinese government claims to have invested a huge amount in various reforestation projects *(White Paper, July 2011)* most of these new tree plantation are of exotic tree species *(fruit trees, rubber and eucalyptus)* rather than more available indigenous varieties. The State Forestry Administration still claims the increase in the total forest cover and not banning the forest harvesting. Some Chinese researchers argue that these new exotic tree crops along with the significant alteration in the age structure of the standing forests is seriously compromising the ecological services provided by forest ecosystems.

**Conversion of grassland to croplands***:* The overall plan during those periods of Collectivization and Household Responsibility System was to maximize the agricultural production from the grasslands. During that era, almost 20 million hectares of grassland in Tibet and Inner Mongolia were converted to croplands, by state-owned farms, state-owned forestry operations, and other state-owned enterprises. They were all labeled "Newly Claimed Virgin croplands" in the 1950s and the trend continued over the last few decades. These grasslands are now severely degraded due to such land use policies.

**Mining:** The Plateau's rich mineral resources have become a resource curse for the local residents and its ecosystem. Since the late 60's, these resources have been exploited in various scales and mostly under very poor environmental norms and regulations. The mining sector not only destroys the natural environment but also creates social tension and distrust when international standard corporate best practices and policies are not followed.

> *A well-known example of this phenomenon is the dramatic environmental collapse in Maduo County (Qinghai Province) and its portion of the Three-River Headwaters (Sanjiangyuan) Nature Reserve, at the confluence of the Yellow, Changjiang, and Qiantangjiang Rivers. Prior to 1970, environmental conditions in this Tibetan county were regarded as excellent, with over 4,000 lakes and rich grasslands. In the 1980s, Maduo accrued wealth quickly through destructive gold mining and achieved the highest per capita income among all of China's animal-husbandry counties. By 2004, however, 90% of its lakes had dried up, in part due to overgrazing. This resulted in economic decline and Maduo becoming one of China's ten poorest counties, despite the fact that the county became part of the Three-River Headwaters (Sanjiangyuan) Nature Reserve in 2001. By 2007, most of the population had migrated out of the region as the area became increasingly unsuitable for human habitation due to ecological collapse.*

Copper, Chromium, Gold, Lead, Iron and Zinc are the minerals of greatest interest to Chinese and other foreign miners operating on the Tibetan Plateau. These are being mined to different extents at various locations throughout the Tibetan Plateau. Over the past few years, the Chinese state government has shown more interest and has invested in the extraction of lithium ores *(lithium carbonate)* on the Tibetan Plateau.

Whenever the Tibetan communities try to put forward their grievances in numerous petitions to higher authorities against the miners; either they are ignored, harassed or even fired upon by the police. In the frequent protests by Tibetan villagers, quite often their immediate concern has been the damages done by the miners to the local streams, rivers, holy mountains and pasture land. The most recent protest in Tibet was reported in Golog county (August, 2012) where the Chinese miners were planning to mine at a sacred holy mountain. According to a recent media interview broadcast on Voice of Tibet (2 Nov, 2012) a local resident of Serkhog town in Amdo *(Ch: Seda county, Qinghai)* shares his grievances regarding the huge problem of water and air pollution from a nearby gold miners. Out of any concerns and hesitations, these miners dump the mine tailing and chemical effluents in the local river with no special attention and action from the local authorities. In recent years, similar negligence have also occurred in other parts of Tibet, for

instance in Kumbum monastery in Amdo *(Ch: Qinghai)*, when the tap water detected high lead (Pb)[1] concentrations due to a mining activity. According to Article 34 of revised China's 2002 Water Law[2], it is illegal to construct waste outlets in protected drinking water sources.

In her latest book, '***China's Environmental Challenges (2012)***', Judith Shapiro writes, *"Severe environmental problems are occurring in ethnic minority communities on the periphery of the country, where grab for resources is thinly disguised as development program".* She further adds, *"When we take a closer look at these regions inhabited by ethnic minorities, we suspect that the government attempts to develop infrastructure are often no more than strategies to extract natural resources at the expense of a minority, marginalized people".*

## C. The Infamous Match Fixing: Pastoralism vs. Grassland policies

According to Fred Scholz (1995), 'it was mobility that was the very essence of herding, whether in the savannahs of Africa, the steppes of central Asia or the high altitude pastures of the Qinghai-Tibetan Plateau, have always needed to move their animals regularly to make use of the spatial and temporal patchiness of grassland resources'. Nomadism was therefore a 'region-specific survival strategy that maintains the grassland in Tibet.

Pastoralism on the Tibetan Plateau is an adaptation to a cold environment at elevations above the limit of cultivation. For centuries, the Tibetan pastoral nomads or ***drogpas****(in Tibetan)*, have successfully maintained a sustainable and mobile lifestyle, traveling from winter to summer pasture lands and from autumn to spring pasture lands. The grasslands on the Tibetan Plateau represent one of the last remaining highest altitude agro-pastoral regions in the world.
China's grassland policies over the past several decades have not only destroyed these grasslands but have also undermined the age old ancestral grassland stewardship provided by the *drogpas*. These policies have not only reduced the mobility of the nomads and their herds, but are also responsible for overgrazing some parts of the grasslands.

When these grasslands are degrading, Chinese policymakers offered only one explanation: the nomads were overstocking beyond the carrying capacity of the pastures but they shy away from accepting responsibility for the compulsory overstocking, fencing etc. during the commune system. For decades, other policies such as de-stocking and rodent poisoning were enforced against the religious sentiments of the herders. For these pastoralists, their herd size is the only wealth, security, insurance, capital and collateral against loans.

In 2003, a grassland rehabilitation policy was implemented throughout China's grasslands and in pastoral areas. In Chinese, the Restore Grassland Policy is known as, *tuimu huancao*ÿ•grØ•I*f*), which means "closing pastures to restore grasslands." The key measure of this policy is the relocation of herders from the grasslands to state-built housing, a measure that has been intensified in recent years. The harshest measures have been enforced in Golog and Yushul prefectures, in the area China considers to be the source of its great rivers.
Other researchers also cite rainfall - rather than livestock numbers, past or present - as the major determinant of the conditions of the grassland on the Tibetan Plateau. Some field studies also revealed that grazing actually helps regenerate the grasslands by improving the soil carbon-nitrogen ratio and extending the growing season. Many researchers have found that depopulating these grasslands and labeling the nomads as 'ecological migrants' will not help to restore the pastures. Although the stated objective of *tuimu huancao* is to grow grass and thus conserve watersheds, careful scientific observation shows that when all grazing is removed, the biodiversity of grasses diminishes, medicinal herbs are driven out by toxic weeds, and woody shrubs make the land unusable. Field observations conducted on these grasslands indicate positive connections between the grazing herds of the nomads

and the grasslands. But recent research has revealed that overgrazing and degradation of the grasslands are not the result of grazing livestock alone. They also say that abandoning these grasslands will lead to the domination by invasive species and reduced biodiversity. The herders point to weather changes, rodents, and mining activities as important factors causing grassland changes.

Despite all these valid arguments, under the pretext of modernization and conservation, these policies were enforced by the Chinese government at any cost, irrespective of the ground reality. The losers are those who defy the central command in Beijing. As a result, tens of thousands of nomads are forcibly removed from their ancestral pastures, compelled to slaughter and sell their livestock. They now have to depend on the state rations and some are forced to sell their belongings to start again small vendors for survival. Furthermore, their lack of other skills prevents them from finding alternate means of livelihood.

## D. Denaturalizing Tibet: Tourism industry

The Chinese authorities have since the 1990's regarded tourism as one of Tibet's pillar industries. According to Chinese state run media (2012), 'Tibet Autonomous Region (TAR)' alone expects 10 million tourist arrivals and 12 billion Yuan in tourism revenue: that would be an increase in more than 60% of visitors. Lhasa, the holy city, a place of spiritual power, is now full of resorts and hotels to boost tourism industry in Tibet. For instance, in Lhasa only, there are now more than 190 hotels with room tariffs ranging from US $100 – 8000 per night. With little regard and respects to the available local human resources, these projects have attracted many migrant workers from the mainland China, outnumbering the local Tibetans in Lhasa. These days, more than 65 percent of Lhasa populations are Chinese immigrants and with the current expansion of railway network, this would increase further. The Chinese official media *(June 2012)* also brags about investing US $63.5 million in Nyingtri *(320 km southeast of the Lhasa)* to develop tourism by building model villages. Similar tourist projects are initiated in various sacred sites and lakes in Tibet without consulting local communities. This proves the ineffectiveness of the central command and the widespread illegal behavior of the cadres, officials and business people.

According to article 5 & 11 as stipulated in the Environmental Impact Assessment law (2003) of the People's Republic of China, it is mandatory that public value and participation should be incorporated in the environmental impact assessments.[3,4] But it is evident from the public outrage and protest in Qidong, Jiangsu province *(August 2012)* and in Ningbo, Zhejiang province *(October 2012)* that such laws remains insignificant on actual ground.

Few years back, a local school teacher voiced against the Hydropower Development Plan for the Middle and Lower Reaches of the Gyalmo Ngulchu or the Nu River and said, "*Most villagers have no idea where the dams are to be built or whether their village will have to move. It's useless caring anyway, because nobody cares what we think. If the government wants to go ahead with the dams, there's nothing peasants can do about it*".

A survey poll conducted in 2011 by GALLUP in China revealed that most of the adult Chinese prioritize environment over economy. The only questions remain whether the policy makers will act accordingly.

## E. Looking Forward & Recommendations:

Tibetan nomads are the expert custodians of the alpine pastures and their knowledge and experience should be incorporated into rangeland management practices. The Tibetan herders should be directly involved in the decision-making process or there should be at least a principle of collaborative management attending to the needs of the pastoral nomads and herders alike.

A healthy and sustainable Tibetan Plateau would not only benefit the entire Asian continent but also it helps in promoting peace and harmony within the region, especially between two major emerging powers (India and China). This has an important geostrategic significance.
The Tibetan Plateau is the land bridge connecting South Asia with East Asia. The very survival of almost 1.3 billion people depends on the water resources originating from the Tibetan Plateau. The impact on Tibet's landscape and its natural resources due to climate warming, land-use policies and large-scale development will threaten not only the future food security of many nations but also their development.

TSGs could spread words in their own constituents about the degrading Third Pole and its implications to gather supports of the local parliamentarians to provide political, financial and institutional support. To this end, we offer the following recommendations to all TSGs attending this conference in Dharamshala:

**1:MONITORING**: In collaboration with private and academic institutions, partner with Chinese and international scientific institutions to monitor and report the environmental degradation in Tibet.

**2: MITIGATION**: With the parliamentarian support, have your government engage with the Chinese government and NGOs to encourage a systematic re-consideration of policies related to grassland management and nomad resettlement. We believe that changes in the ecosystem of the Tibetan Plateau will require sound mitigation policies and on-the-ground stewardship, which must include the integral participation of Tibetan stakeholders, primarily the nomads and their indigenous experience in managing this land for centuries.

**3: REGIONAL FRAMEWORK**: We realize the significance of creating a regional framework on water security that would facilitate cooperative agreements among all riparian neighbors so as to promote transparency, sharing of information, pollution regulation, and arrangements on impounding and diversion of river water. As an initial step, with your support, especially from those participants who belong to the downstream countries we can initiate and explore the possibility of creating a common network with our office to share information related to the rivers that flow from Tibet.

**(Footnotes)**

[1]*Lead interferes with a variety of body processes and is toxic to many organs and tissues including the heart, bones, intestines, kidneys, and reproductive and nervous systems. It interferes with the development of the nervous system and is therefore particularly toxic to children, causing potentially permanent learning and behavior disorders. Routes of exposure to lead include contaminated air, water, soil, food, and consumer products.*

[2]*China's 2002 Water Law, Chapter IV: Protection of Water Resources, Water Areas and Waterworks*
*http://www.china.org.cn/english/government/207454.htm*

[3]*Article 5 of the EIA Law requires the government to invite experts and the public to participate in EIA.*

[4]*Article 5 of the EIA Law requires the government to invite experts and the public to participate in EIA.*

# A CULTURE ENDANGERED: POLICY IMPACT ON THE PASTORAL NOMADS OF THE MELTING TIBETAN PLATEAU

**Tenzin Norbu**

The Tibetan Plateau, with its unique environment and biodiversity, is one of the most significant regions in the entire world. With its snow peaks and glaciers, Tibet is the source of major rivers that flow into Asia. As a result, approximately 1.3 billion people living in 5.6 million square kilometers of drainage basin are dependent on the health of ten major rivers that originate in Tibet. But critical components to Tibet's ecosystem are undergoing major transformations due to climate change and failed policies of Chinese government—including receding glaciers, shrinking and disappearance of thousands of lakes, drying of wetlands, thawing of permafrost, and reduced flow regimes in many rivers.
For centuries, the Tibetan nomads and herders have successfully maintained a sustainable and mobile lifestyle, traveling from winter to summer pasture lands and from autumn to spring pasture lands that cover almost 70 percent of the Plateau. China's different grassland policies, introduced over the years, threaten the sustainability of this delicate environmental balance. The new policies restrict the flexibility and mobility of the nomads; and their livestock has been blamed for overgrazing the grasslands.
It is now widely known that the actual grassland degradation and the increased grazing pressure started from the Commune System, introduced in the late 1950s. The system led to increase in herd size far beyond the sustainable level, resulting in grassland degradation. Only in 1980s, after the failure of the commune system, nomads regained some control of their animals but not their land, and number of herds decreased to a more sustainable level.

The Household Contract Responsibility System (HCRS), or "Grassland Law," was adopted in 1985 to protect the degrading grasslands and to modernize the animal husbandry. Nomads were issued certified guarantees of long term leaseholds to their land, which gave them a sense of ownership and encouraged conservation of pasture. But along with this law, the state authorities gradually implemented the so-called "Four-Way Program" or 'Si Pei Tao', ordering region-wide fencing regimes and construction of shelters for the nomads and their livestock, who are held responsible for the problems of grassland degradation.

In 2003, a grassland rehabilitation policy was implemented throughout Chinas grasslands and pastoral areas. Thishis policy is referred to as the "Restore Grassland Policy" (*tuimuhuanco* in Chinese, which means closing pastures to restore grasslands). In recent years, moving herders from the grasslands to state built housings are being intensified and have now become the central measures in protecting these grasslands. The land lease certificates guaranteeing nomads long term land tenure have been nullified by the new command. Consequently, all the necessary skills, risk management strategies, environmental services, traditional knowledge and biodiversity conservation of nomads have been made superfluous. Many scientists, including Chinese scientists, have concluded that the grasslands of Tibet, when grazed moderately and intermittently, actually maintain a higher biodiversity and healthier pastures. Despite the

scientific argument that depopulating these grasslands and labeling the nomads as ecological migrants will not help restore the pastures, Tibetan nomads are forcibly removed from their ancestral pastoral lands, compelled to slaughter and sell their livestock, and settled in new concrete settlements. They now have to live on state rations, and some of them sold their belongings to become small vendors. And their lack of other skills prevents them from finding alternative means of making a living.

Full article available on this website:
http://www.hrichina.org/crf/article/6136

## Yartsa Gunbu: The Interplay of Power and Wealth

**Chokyi, Environment and Development Desk**

Caterpillar Fungus (Tib: Yartsa Gunbu or *bu*) found in Tibetan upland meadows is among the rare and expensive herbs. These cordyceps sinensis (known in scientific world) are being exploited extensively for its both commercial and social value as about 96 percent of world's harvests come from the plateau (Finkel, 2012). Rich Chinese now uses the fungus as gifts to their bosses and friends.

These medicinal properties plants are mostly found in areas that are not economically developed. Poor countryside nomads and farmers seize the opportunity and harvest the fungus, commonly known in Tibetan as Yartsa Gunbu, as it fetches $ 50,000 for a pound of top-quality in retail (Finkel, 2012).

The *bu* has now replaced the famous French champagne as a status symbol in the parties of wealthy and powerful Chinese. The fungus is originally found in Tibet. It is mainly taken as a tonic and aphrodisiac by Han consumers and has little to do with the native Tibetans who even hardly eat them. In area like Dengchen of Chamdo prefecture, county government mobilized people to collect the worm. *Bu* is harvested there at the rate of 10 specimens per person per day making 5000 kg (12 million specimens) by 35,000 people in over 30 days (Winkler, 2008).

*Bu* collection gains so much recognition that people now have to buy permits to collect it at rate ranging from US dollar 1.3 to 38 per person per season. However, price for collection permit for outsiders is between 38 and 200 US dollar per person per month in a season. Most of these outsiders are non-Tibetan mainly Hui Muslims, from northeast Qinghai and Gansu, coming in thousands and outnumbering the local collectors, who are not bound by any policies on the collection of *bu*. As a result, restriction on outsider worm collectors has been recently applied in some counties causing riots and unrest in many parts of the region in 2004 and 2005 such as Dzato county of Qinghai, Gyamda Kongpo and Nyingchi of TAR (Winkler, 2008).

The money generated by permit fees is supposed to spend on cleanup work after the collection season but the area is found with plastic, beer bottles, discarded noodle containers (Winkler, 2008). So where does the money go?

Even though the *bu* collection has been main economic driver for rural Tibetans, *bu* farming in the past was boycotted by Tibetans to protest against the Chinese government. Tibetans in Amdo Ngaba launched a farming boycott movement to voice against the government for its repression in Tibet (Mandel, May 2012).

Large *bu* brokers deals in millions of dollars are predominantly Hui Muslims, who originally come from Gansu province and who buy *bu* from small brokers and middlemen. Native Tibetan brokers only control less than half the 30,000 kg of *bu* dealt annually in Lhasa (Winkler, 2008).

Framing the *bu* production region as an area endowed with an environment that possesses magic medicinal effect in advertisements by the *bu* producing companies attracts the business. Development of infrastructure such as roads have made possible for vast collection of *bu,* thus endangering the source habitat. *Bu* in some areas in the region is reportedly declining. However, consumers in far mainland China seems least bothered and have no innate affection for Tibet' environment. Instead they have this fear that they might not get to consume *bu* in near future and want to exploit when it is currently

available. A *bu* consumer in the far posh area of mainland China comments: "Better enjoy it as much as possible before it's gone."*Bu* has reached beyond its original medicinal purposes by now passing through rich peoples' hands as symbol of power and wealth. A father when handing over his daughter to her groom at wedding says, "Now I hand her to you. Treat her well. Feed her more *chongcao*!" Chongcao in Chinese is Caterpillar Fungus (Yaqian, 2011).

*Bu* has become a famous bribe among Chinese corrupt bureaucrats who readily accept the bribe. They find it the best remedy for exhaustion from their excessive consumption of high protein food and wines. It has been used by the Chinese government in exchange of foreign currency with Hongkong from long time (Yaqian, 2011). The best qualities of *bu* were being sent to Hongkong and consumers there started having *bu* from the late 1980s, but this trend of *bu* consuming gradually shifted to the north China. Businessmen from mainland China come with a bag full of money to buy *bu* on the street of herbal medicine in Hongkong. Consumers in Hongkong argue that money to mainlanders is nothing to worry about and which they earn easily by many 'short cut' ways in the mainland, while it takes all their life time to earn the same amount. So there is always friction between the consumers of *bu* that now signifies power status than real purpose of its discovery (Ibid).

Source: Gettyimages

The high demand of *bu* among the Chinese consumers in the mainland and a large Hui Muslim brokers arriving in almost all centres where *bu*s are dealt will endanger the *bu* in long term as there is already an issue of its sustainability. Earlier in the past, one can find *bu* at an elevation of 3,500 m in Amdo, and now it is found only above 4,500 m, which clearly signal its scarcity. One *bu* digging will cost 30 square cm of earth making it tens of meters square from 50 days with an individual collecting rate at 20 fungi a day. This will harm millions of square meters of alpine meadows over a year (Rudolph, 2012).

Botanist such as Winkler suggests to assess sustainability of the fungus with the Rapid Vunerability Assessment techniques that integrates indigenous and scientific knowledge. It is strongly recommended that community based management of resources and traditional conservation practices should put in place for maintaining sustainable prodution of the fungus.

Reference:


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## EDD-Talks/Seminars/Workshops attended: (2012-2013)

| Date | Event | Venue |
|---|---|---|
| 20-26 April 2012 | Environment Awareness Program in Tibetan Settlements | MIAO, TEZU, Tenzin Gang |
| 24-Apr | WPCT | Ottawa, Canada |
| 19-May-12 | Awareness Program | Sherab Gatsel School |
| 29-May-12 | Awareness Program | Sahra |
| 5-Jun-12 | World Environment Day | Kotwali, Gandhi Park |
| 13-22 June | Rio Earth Summit | Brazil |
| 31-May-12 | Awareness Program for Indian diplomats | Shimla |
| 9-Jun-12 | Tibet Support Group Meeting | Dharamshala |
| 5-9 June 2012 | 4th Khoryug conference | Norbulinka |
| 22-Jun | 12th Gurukul Program | Dharamshala |
| 1-Aug | Awareness Program to NRT | Upper TCV |
| 26 July-10 August | Awareness Program in Tibetan Settlements | South India |
| 22-28 September | Public Service Commission training | Sarah |
| 6-Oct | FNVA Tibet Himalaya Conference | Leh, Ladakh |
| 11-Oct | Sambhota Teaching Staff-Awareness Program | Sarah |
| 8-13 October | CBD COP11 | Hyderabad |
| 24-Oct | International Climate Action Day | Sambhota Tibetan School, Paonta |
| 16-Nov | Tibet Support Group Meeting | Upper TCV, Dharamsala |
| 2-Dec | UNFCCC COP 18 | Doha |
| 26-Dec | Awareness talk to youth | Selaqui, Dehradun |

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